The American Journal of
CLINICAL MEDICINE
Dependable Therapeutic Fact for Daily Use

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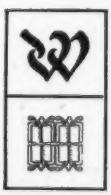
What War Means to The Doctor



WAR means to us, to select those best fitted for military service. It means to take care of them, in camp, on the march or transport, and in the field; securing the best sanitary conditions and preventing war-diseases. It means caring for the wounded. It means also, and of equal importance, caring for those left behind to carry on the life-work of the nation. It means doing our share in the preservation of health, of food; in the lowering of infant mortality—Verily, war means a lot to physicians.

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CLINICAL MEDICINE
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The Food Situation of the Country

IT is a favorite assertion of newspapers, orators, and others that the United States of America is confronted by the most stupendous and serious problem that the nation ever has been called upon to solve. It hardly is within the scope of our survey to discuss the reasons for the country's active part in the great war now being fought, as it seems, to a finish and, let us hope, to a finish of all warlike undertakings, for evermore. It is sufficient for us to bow to the inevitable and to do our share, each one for himself, in the work that is laid upon the citizens of our country in the determination to accomplish the high ideals for which we have taken up arms.

It has been pointed out by many writers that the most important and, indeed, the essential role to be played by the United States of America in the present war is, not, to supply a fighting army, however greatly this may be needed particularly to give heart to our sister republic France that already is about exhausted, albeit undismayed, but, rather, that our part of the work is, to furnish the supplies in the very multitudinous immensity in which they are required. Indeed, it cannot be doubted that the final outcome of the war may be determined by the amount of food the United States will be able to contribute to the pool of the allies' resources.

All this has been iterated and reiterated so incessantly in the last few weeks that it has become trite; and, yet, we may well see to it that the efforts in the direction of using available supplies economically and of producing new ones as plentifully as possible are not scattered, but that these efforts are carried out according to a uniform plan, one calculated to give the best-possible results for the greatest good of the country and of our allies.

At about the time when President Wilson appointed Herbert C. Hoover as director of national food administration, there appeared in *American Medicine* (May, 1917) a discussion of this subject written by the editor, Dr. H. Edwin Lewis, of New York, which presents a masterly study of the requirements of the best methods for the solution of the problem. It would be well for our readers to write to Doctor Lewis, asking for a reprint of this important article (not forgetting to enclose a stamp).

Speaking of the numerous private undertakings all through the country in pur-

suance of the campaign to stimulate the planting of vegetables in back yards, open lots, small parks, private and public lawns, and so on, Doctor Lewis expresses the warning lest efforts be scattered in, and limited to, these "agricultural pursuits on a Lilliputian scale." He points out that, to exert any appreciable influence on the actual volume of America's agricultural products, millions of acres must be planted in addition to those under cultivation in 1915 and 1916. The increased output of grain, potatoes, beans, and all other staples must be in millions of bushels, in order to have any measurable effect in meeting the requirements. The danger in planting back yard areas, praiseworthy though this is, entails a possible waste of energies that might much better be directed to more effective pursuits, and it is to be feared that the results will not always be commensurate with the efforts expended. Despite this danger, the author does not desire to discourage any effort, however insignificant, nor to suggest a discontinuance of anyone's project, however small and inconsequential. He does indicate, though, the true magnitude of the problem before us when he says that this country must, beginning with October, 1917, contribute at least 1,000,000 tons of staple food-products a month to the allied and neutral countries of Europe, over and above its normal exports; and that, should peace be declared before this date, this amount will probably have to be greatly increased.

To aid in the realization of what this will mean, it is briefly pointed out that this increase of food export will require the movement of 30,000 freight-cars, or 1000 trains monthly, or over 30 trains of 35 loaded cars daily, to get this quantity of food to the seaboard. Carrying this thought a little further, it will require the loading and despatch of over six 5000-ton ships every day to get this amount of food-stuff to the ports of entry on the other side of the Atlantic. Let it be emphasized that this is entirely separate from the shipping that must be devoted to the country's regular foreign trade, to food-stuffs or to other exports, such as machinery and building-material, fuel, farm implements, war-munitions, and the supplies that will be imperatively needed if any army-contingent is sent to France. These figures are conservative and probably should be substantially increased.

All this is, by no means, impossible; for, the United States undoubtedly has sufficient tillable land to raise enough grain and other foodstuffs to feed the entire white race, yes, possibly the whole world.

Doctor Lewis declares that it is of paramount importance to ascertain the following questions and to give the people exact information in regard to them.

First: What America must do to save the world from famine,

Second: What the actual resources are in (a) surplus food-supplies, if any; (b) available tillable land; (c) prospective labor,

Third: How the forces of the nation can best be organized (a) to increase the food production to the highest point for the coming season; (b) to avoid the various factors liable to jeopard the various crops; (c) to aid and promote successful harvesting; (d) to control the uses and disposition of the crops when harvested; (e) to ensure necessary transportation to storage and distribution-centers; (f) to regulate food prices, if necessary, without injury to the producer, injustice to the consumer or disturbance of collateral trade conditions; finally (g), to avoid all possible decrease, in order to conserve their future productivity.

In order to solve these problems, it is claimed that there should be an immediate organization of a national food commission, to take full charge of the food-problem. [This was written before Mr. Hoover was appointed as director of national food administration, and some of the recommendations contained in it are already considered. —ED.] This commission, Doctor Lewis says, should not be large, but should consist of seven men: a chairman, to be known as director of national food control, who should be the executive head of the commission, with power and authority to act therefor. To facilitate the work of this commission, which will be enormous, it should be divided into a number of departments. These, at the beginning at least, should be six, as follows: (1) Department of food production. (2) Department of supplies and labor. (3) Department of transportation. (4) Department of distribution. (5) Department of finance and economics. (6) Department of research and conservation.

It would lead us too far to enter into the many interesting details of the plan outlined in this paper. They touch upon most of the needs associated with the food-problem, its sources and supplies, upon the prevention of waste, and so on. It also touches upon the waste incident to the fact that vast quantities of valuable food-products are allowed to spoil and rot, for one reason or

another, whether the producer can not or will not harvest his crop (apples and other fruit, for instance) or whether provisions are held for a rising market. In this connection it may not be amiss to mention that the present writer was credibly informed of the following incident. Last winter it happened repeatedly that carloads of excellent potatoes were thrown into a huge dump near one of the railway lines operated out of Chicago, care being taken to prevent any of these potatoes being taken away; by next morning, they were all frozen. The reason for this criminal waste was, that it was feared that the price of potatoes would be lowered if these supplies were put on the market.

A commission such as is suggested by Doctor Lewis would have to have power to prevent criminal waste of produce of this nature, and its operation would serve to safeguard the production and distribution and the utilization of articles of food as well as of all the many other materials that are necessary in the daily economy of both the people at home and the armies in the field.

Almost all doctors, except those in French plays, have some sense of humor.—*F. Marion Crawford.* (Thanks, Mr. Crawford.)

WOMEN AND—WOMAN IN THE WAR

In the midst of her dire struggle for existence, France takes time to cast a glance into the future. Especially the sullen subsidence of the invasion shows that the crest of the flood has passed and the reparative processes begin to be studied. When the stress came upon the nation, her women responded with energy and enthusiasm, throwing themselves into the battle and themselves taking on many vocations previously pursued by men alone. Nor was this a mere temporary burst of sentiment, but the women have stuck to their work, hard and difficult as it often has proved, with a fortitude that has found, as yet, no limit.

This nation-wide response to the need has sent to the front many thousands of men who otherwise would have been held behind the lines in the many absolutely essential vocations of the national life. Also it has solved the problem of support for the family, when the former bread-winner shouldered his gun and marched to the trenches. But, the problem is only half solved. It took the reptile millions of years to develop into a bird—can a woman over night render herself qualified to fill the place of the man?

For, however the woman, *qua* woman, may succeed in filling shells, handling poisons, carrying heavy burdens, driving motors or minding lathes for eight hours a day, how about the woman pregnant? Can *she* do all the stunts she is at present doing, without injury to herself or to the coming child? This is no question of willingness, but one of physical capacity, of choosing between two duties the one that is the more vital. And who can doubt which is to be chosen?

In a discussion at a session of the Academy, reported in brief by *Le Monde Médical*, Pinard gave utterance to the warning. At the outbreak of the war, wise precautions taken had reduced the number of infants put out to nurse, as well as the puerperal and infant mortality, while the average weight of nurslings increased. As the women flocked into the factories, all this was reversed. Pinard urged that all pregnant women be excluded from this kind of work until six months after confinement. But, to compensate for the loss of wages, he suggested a daily allowance of 5 francs to each woman in these circumstances. This, to enable her to make the right choice between maternity and wages.

The commission to whom the matter was submitted suggested that such women might be allowed to continue this work, provided certain indispensable conditions were fulfilled—light work, medical examinations, rest during the last weeks, rooms in which the infant could be suckled, when necessary, without loss of wages.

Bar asked that the discussion should not be limited to the present time, as it applied to the working woman at all times and would become more pressing after the war closed, when the number of pregnancies would be very much greater than it is at present.

Nobody whose observations have penetrated beyond the surface, but knows that there is in woman a vast fund of potential capability that is not ordinarily suspected. Whenever an emergency arises, she astonishes the crowd by her display of energies hitherto allowed to lie dormant. Humanity leaves the better half of its brain-power to rust in disuse. Very often the woman never comes to her own until she has been aroused to action by such a demand. It generally does her a world of good to be startled out of her equanimity by some social earthquake. But, all this is to be modified and restrained by the recognition of the fundamental principle, that

civilization, the social system, is founded upon woman in her capacity of mother and rearer of children.

Half the Christian world worships woman as mother. All the world worships maternity. If there still exists in any man, even the most utterly depraved, any shred of capacity to know good or to reverence aught, it is respect of motherhood.

Medicine has a religion of its own, useful, immediate, daily. With reverence for what it cannot understand, it takes up and pursues its daily task with patience and in the love of man, with the hopes for more knowledge, more usefulness, and these are fulfilled in the succeeding generations.—*David W. Cheever.*

MALARIA—OLD FACTS AND NEW

Malaria is one of the oldest diseases with which we are acquainted, as is proved from the chronicles of ancient medical writers.

Writing in the fifth century before the christian era, Hippocrates described the malarial fevers, dividing them into continued fever, daily fever, tertian fever, and quartan fever, and attributing the origin of the fever to the drinking of contaminated water. Celsus (about 25 A. D.) has left us a finished clinical description of intermittent fever and many of its accompanying symptoms. He differentiates a quotidian fever, characterized by quartan attacks, and also mentions as an especially pernicious fever the malignant tertian.

Varro (117 to 125 B. C.), with the anticipation of genius, considered the cause of malaria to be invisible organisms. This etiological idea was lost in the middle ages, on account of the prevailing influence of Galen's teachings, and it was not until Morton, at the end of the seventeenth century (1689), again picked up the thread that the etiology of this disease was led into more reasonable channels. It was at about the same time that Torti (1712) gave the name to the disease by which it is known today. In accordance with his view, that it was of miasmatic origin, he designated it as *mal* (bad) *aria* (air)—bad air, malaria.

In the meanwhile, the cinchona bark had been introduced, from Peru, into the materia medica, through the Viceroy Del Cinchon, and physicians came to distinguish the malarial from other fevers by the fact that the former yielded to the administration of this medicament. On the basis of this differentation, Torti built up a description of malarial diseases that is classic. Clinically his work has never been surpassed by any subsequent writer.

While the pathologic study of malarial diseases was furthered greatly during the first half of the nineteenth century, it was not until 1880 that the actual cause of the disease was definitely discovered and described by Laveran.

It still remained necessary to determine the mode of transmission by which the plasmodium malariæ was introduced into the organism. Contact-infection from person to person very naturally had been suggested, but had been found to be at least of very subordinate importance, if of any at all. The idea that possibly the malaria-parasite was transmitted through an intermediary host had been voiced as early as 1717 by Lancasi, who suggested that the infection may be transmitted by mosquitos, and who probably was the first to express such an opinion.

The theory of insect transmission was materially supported during the eighties of the last century by the researches of various investigators; until Ross could demonstrate beyond all doubt that certain mosquitos are necessary for the transmission of the parasite; that these insects act as intermediary hosts, allowing certain processes of evolution to take place; and that the body of the insect is the natural habitat for the development of this evolution, and that this can take place in no other way. Later investigations demonstrated the correctness of these results by making possible the destruction of mosquitos and the prevention of their breeding. The successful prophylaxis of malaria is one of the notable achievements of the last twenty years and constitutes one of the various factors that established the possibility of rendering tropical regions habitable for the white man; they, in fact, made possible the building of the Panama canal.

THE HIGH COST OF LIVING

This 14th day of June, in the year of Our Lord 1917, I paid 20 cents for a pound of green peas—not in the city, but the Michigan town that ships more produce to Chicago than any other on the lake. Shelled, the net edible part was just 3½ ounces. Just about a dollar a pound.

For that, one may buy Whitman's, Maillard's or Huyler's finest French confectionery, and these containing, too, about seven times more actual food-value. Beans, beets, carrots, lettuce, cucumbers, tomatoes, all run at 15 to 20 cents a pound. Rice, the last of the cereals to rise, is now 12 cents. The

cheaper cuts of meat are far less expensive, when one compares nutritive values, than any of the vegetables. The cheapest food today is the banana, at 5 cents a pound—and yet, the United Fruit Company is suspiciously like a trust!

There is no real reason for such exorbitant prices for the perishable products that are not exportable. The country has plenty of food for its own needs and plenty to transport to our allies. The reason for the high prices is very simple—everybody concerned sees "lashins" of money about, hears of the fortunes upbuilding, and feels that he, too, might as well grab off a chunk. So long as people will pay ten times their value for their goods, why not get it?

The American social system was founded and erected upon individuality. The Jeffersonian ideal of a community held in order by the self-respecting people, defended by the citizenry, every man his own soldier, governed as little as possible, courts rendered unnecessary by the native sense of justice of each was the most passionately loved of any political principle ever promulgated by man. The pioneer-life bred self-reliance, keenness and readiness for adapting conditions to the needs, and the strong personality of the American.

But, it also bred shrewdness, which degenerated to trickery and, above all, selfishness. Each man had to look after himself and his own interests, and contempt was the only emotion excited by the man who allowed himself to be overreached. We like to believe that the dollarchasing, with which we are reproached by Europe, is due to our ideals of winning by industry and wit, while hers is, to win by robbery. But, really, the man who contributes most to the picture of the American, as he appears to their eyes, is the one who sells a shipload of wooden hams to the unsuspicious buyers. This was done on the Atlantic coast of South America, and it took a quarter century to undo the harm it inflicted on the American name.

In many cases, the raise in prices means little, because the consumers participate in war-profits; but, it comes hard on persons whose income is fixed and unaltered in nominal value, although its purchasing-power is fearfully diminished. Happy is the man whose employer has the humanity to recognize this fact and does what he can to equalize the conditions. He may well expect to have a due return for his generosity, in the increased zest that gratitude imparts to the employee. There is no human being but puts a new energy, an extra punch into the efforts he makes for such a man. But, if one is unfortunate enough to have an employer to whom the matter is only one of getting the utmost possible service for the smallest possible outlay of cash and who, yet, calls for the same lively interest from his half-starved workers, what's the answer? Economize!

Study the markets and the tables of comparative food-values. Become learned in calories. The best way to restrain the disposition to extortion is, not to buy. Let the green foods wilt in the shops, until the grower refuses to buy from the greedy farmer. Whole wheat, well cooked, is as nutritious as the fancy breakfast foods, more wholesome, as it requires full mastication, and you do not pay 50 cents a pound for it, either. Corn is cheaper than wheat and can be cooked in more ways than any other grain—all good, too. Dandelions and sour dock supply anti-scorbutic greens of great value. A small box of earth furnishes room for the three-weeks' radishes or for leaf lettuce, even if you have only a sunny window instead of a back yard. Tide over the next few weeks, and nature will bring relief, in the shape of a bountiful yield of the garden products. Already rhubarb is down to 2 cents a pound and radishes sell four bunches for a nickel.

Watch the garbage-can. Do not throw away a morsel of wholesome food. Pocket your silly pride, throw all the leftovers into a pot, with plenty of seasoning, baptize it olla podrida or goulash or bouillibaise, and serve without a word as to its composition.

Preparedness?

Two years ago, the writer undertook to ascertain on how little a man could sustain life and good health. He gradually cut down his diet until he went through an entire week on an outlay for food of just 35 cents. How? Bread, cheese, bananas, lemons, tea; bought where cheapest. The experiment ended with Thanksgiving morning, and the dinner that followed—yum, yum!!!

The time has come to put into practical operation Doctor Sudduth's suggestion that alfalfa be utilized for human food. Some readers may remember that a while ago he gave an alfalfa dinner in Chicago, at which every dish was composed of or contained alfalfa. This clover-like leguminous plant is capable of presentation in a number of forms, palatable and attractive. A meal may be prepared from it. The ground seeds to be used like cornmeal or as a flour for mixing with cereals. The entire dried plant contains about 14 percent of nitrogen, and Sudduth showed that this could be materially increased

by selective breeding and cultivation. Since then it has been shown that in vitamine content alfalfa stands next to eggs and butter-fat and can, therefore, be utilized to lessen the proportion of these expensive elements in our diet. Furthermore, the veterinarians have demonstrated that a diet of alfalfa furthers the development and growth of animals far more than does a balanced ration of grain and roughage. The present writer added alfalfa to the food supplied a farmyard of chickens, saving the most of the grain previously fed the fowl, and in two months raised the yield of eggs, from 30 a day to 75.

Here the matter rests. The scientific and practical work has been done; the demonstration is complete. It now remains for the dealers to place alfalfa on sale in such shape that it may be utilized by the housewife. This does not mean that it should be put up in fancy packages and retailed at, say, 10 cents a quarter of a pound, but, rather, that it should be presented in some such form as wheat-flour and cornmeal now are. The best grade of timothy hay is quoted in Chicago today at $20.00 a ton. This writer never heard of alfalfa fetching that much; but, if it does, we have a wholesale rate of a cent a pound. Can not the middlemen manage to place it on the retail-market for, say 3 cents? Something like 200 percent ought to pay the cost and profits, surely. Then we might easily substitute alfalfa for a quarter of our usual dietary. This would free enough of our general food supply to feed starving Europe and solve the most essential problem of the war. Use alfalfa for one-tenth of our food, and the high cost of living would tumble with a crash like Humpty Dumpty's, to rise no more.

Breakfast once a week on alfalfa mush, once on alfalfa hot cakes, and two days each week use alfalfa bread. That would not induce satiety, and the increase in vitality induced by its vitamines would soon create an alfalfa-appetite.

If you cannot shout halleluja from the housetops, you can say amen in the little valley where you live.

DOMESTIC RELATIONS

When lovely woman stoops to folly
And finds too late that men betray,
What, charm can ease her melancholy?
What art can work her guilt away?

The answer is easy—apply to Chicago's court of domestic relations. The instinct for cohabitation is universal with men and women; but, with the former, it is casual and for the time ends with the accomplishment of union. In the woman, the desire is incompletely satisfied until maternity has resulted. There never has been an age, a race, a climate, a faith in which men have not been selfish. They woo the woman, win her, then jauntily go their way, leaving her to bear whatever consequences may follow. The whole trend of civilization, of religion, of our social system is toward the establishment of the home; and the end of this is, to saddle upon man the responsibility for his sexual acts. That this same home comprises all that makes life worth the living, is incidental and by no means an appreciated and intended consequence.

A completed and perfect social system never has been, is not, and never will be. There always are loose ends; always unevoluted individuals, who have not developed up to the appreciation of our community ideals, always setbacks, always rebels against the restrictions and duties of civilized life. Since we always will have among us individuals who have not passed the robber-stage and still seek to possess themselves by force or fraud of the property of others, we should not be surprised to find that a certain number of men still follow primitive and crude methods in dealing with women. That is, some men still win their selected women as cohabitants, then go gayly away without thought or care as to the possible consequences. Small wonder since to the law fornication is no crime, unless it results in bastard offspring. To the social law, it is no crime, unless one is found out.

How much of this phase of unevolution does there exist in the great city of Chicago, with its two and a half millions of human beings? We take the records of the court of domestic relations, which looks after bastardy cases, compelling the putative father to contribute to the support of his child; also to desertion-cases, compelling husbands to aid in supporting their wives and children.

During the first four months of the year 1917, fifteen hundred women and many children were awarded shares in the earnings of husbands of wives and fathers of children. The court collected and distributed in this time the sum of $46,083.85 This was about 16 percent more than in the previous year, the increase being not so much in the larger number of cases as in a closer application of the law, especially since the advent of Judge Stelk. Dodgers, slackers in the matrimonial battle, were sternly brought to book and com-

pelled to respect the mandates of the court. Nevertheless, there has been no disposition to make the court an instrument to gratify feminine spite; whenever an appeal is made against the first award, a fair opportunity is afforded for revision and judgment is rendered according to the evidence. If this shows the order to have been justified, it is enforced to the letter.

During the first four months of 1915, the amount collected for fines was but $80.00. In the corresponding period of 1916, there was collected $571.00; and in 1917, after Judge Stelk's advent, $1,160.00. These amounts represent the cost of attempted evasions by delinquents. Add to this the following sums paid in costs: $299.00, $127.50, and $1,055.50, respectively. The cash collected for the women and children, including nonsupport- and bastardy-cases, was $36,302.76, $38,904.89, and $46,083.85.

In other words, 1,500 women were awarded an average of $30.72 for four months, of 1917. $7.68 a month for the support of themselves and their children—surely, not an excessive award or one permitting very high living just now. And the entire class of wife-deserting and bastard-breeding men of Chicago paid their families a sum amounting to about 2 cents per head for the entire city population.

Rather a pitiful showing for a city that prides itself on its metropolitan wickedness!

The marriage game, or, if you prefer, the business of marriage should be based upon a fifty-fifty footing; both as to duties and as to privileges.

THE FEVER OF TRAUMATISMS

One of the queer things about that queer animal, man, is, the way he takes things for granted and puts up with them when he does not have to. Somebody rebelliously asks: "Why must I dot my i's and cross my t's?" Come to think of it, why? Just compute the time and exertion that would be saved if we left these miserable relics of a prehistoric day undotted and uncrossed—and the world would wag along just the same; and the Germans keep on being dreadful, until humanity rises and exterminates the race with the wolves, sharks, and rattlesnakes. Now, major, just keep on your shirt—it was not one of our much-loved American-German fellow citizens who blew up 120 girls down in Delaware the other day.

Well, to revenons to our muttons, we have accepted post-traumatic and post-operative fever as a matter of course, when we really did not have to. Long years ago, a French colleague hung around Péan's clinic. The great surgeon used the thermocautery and amputated the neck of the uterus for an epithelioma. Metroperitonitis followed promptly, for which ice was applied over the abdomen. The depression was relieved by six granules of strychnine arsenate, of 0.0005 Gram each. That evening, the woman's pulse registered 92, the temperature 100.4° F. Aconitine and veratrine were given, a granule each every quarter hour, 0.0005 Gram each; and a good night followed, with peaceful sleep. Next day, the patient complained of thirst; pulse was 90 and the abdomen supple and not tender. Foreseeing fever, the doctor —Filleare—continued the aconitine and veratrine until 8 p. m., adding six doses of strychnine arsenate. During the night she received four doses of aconitine and veratrine, but was not awakened for her medicine. Seven days after operation she sat up on a chair, and on the fifteenth day went out.

Péan was so struck with the operation of what he denominated the "marvelous granules," that he furnished another case, a woman of 64 years, from whom he had removed the breast for cancer. Thanks to aconitine and quinine ferrocyanide, she had not an instant of fever, and on the eighth day left for her home in the country, cured.

A girl of 28 years had the breast and regional glands removed. Filleare promised Péan that there should be no fever, but he feared it. The patient was given strychnine, veratrine, quinine ferrocyanide, and a laxative saline. The pulse never rose above 84, the patient took food the day after the operation, suppuration ceased on the sixth day, and she was discharged on the fourteenth day.

It is easy to prevent or at least to moderate to an insignificant degree the fever following traumatisms; and no possible harm ensues, but, rather, considerable benefit, in the way of preserving the patient's strength and preventing discomfort. Rest and nutrition are favored and a better healing of the wounds results. The technic is simple, the treatment possesses an elasticity that no other method offers:

Free the bowels with simple, nonirritating saline laxatives; administer before the operation a few doses of aconitine and digitalis, with veratrine added if fever of the sthenic type arises, or with strychnine arsenate if asthenia is displayed—and the wise old Belgian, Burggraeve, enunciated this maxim: "Under sthenia, asthenia always lurks." Quinine ferrocyanide is employed, to meet any septic or infective element that may be

present. It is little employed here, but deserves more extended application.

The greatest efficacy of this method lies in its application as a preventive; yet, it is exceedingly potent when fever has developed.

Aconitine and veratrine open the doors of elimination and let the toxins out of the system. Digitalin meets the cardiac weakness before it has gone so far as to be manifested in a weakened pulse—and a skilled diagnostician does not have to wait for the latter to detect the coming debility. Strychnine activates every other drug with which it may be given and arouses the central nervous system to healthy activity. Arsenic—we are just beginning to realize why the profession stuck to arsenic even when all the laboratory-workers insisted that it did only harm and never was curative. We feel like asserting that arsenic imparts to the red corpuscles a power of resisting the attacks of any invading microorganism, especially if of the animal class; and, we never know when we are being invaded by these known and unknown pests.

Any man who tries to get through life purely as a receiver, without ever giving anything in return, is bound to find living a pretty unsatisfactory experience.
—*American Magazine.*

MORE DISCOVERIES BY DAKIN

We have had occasion, from time to time, to refer in these pages to the wonderful research-work of Dr. H. D. Dakin, the great American chemist whose name is now known to virtually every physician in the world. His rediscovery of the great value of chlorine and chlorine combinations has been popularized and capitalized by that wonderful man, Dr. Alexis Carrel, who has demonstrated that certain antiseptics of this class are, at the same time, the most efficient and the least toxic at the disposal of the surgeon.

We shall not try to tell again in this brief editorial the story of Dakin's hypochlorite solution, or of para-toluene-sodium-sulphochloramide—better known as chlorazene or chloramine-T. The latter antiseptic is rapidly becoming the most popular of any in common use. It is being utilized by thousands of surgeons, and every day its vogue is increasing. It has been adopted by the United States Navy, the reasons therefor being clearly pointed out in an editorial in *The United States Naval Medical Bulletin* (an abstract of which appears in the What Others Are Doing department, this issue), and the paste or cream made therefrom is highly praised by Carrel, Daufresne, Vincent, and others, in a symposium published in the organ of the Rockefeller Institute, *The Journal of Experimental Medicine*, for July.

Not contented, however, with these achievements, Doctor Dakin has recently introduced two new chemical substances that promise to be of the utmost value to physicians and the community at large.

The first of these is a tablet for sterilizing water, which he has called halazone. This is described in a paper published in *The British Medical Journal* for May 26. Halazone chemically is para-sulphondichloraminobenzoic acid. It belongs to the same general family as chlorazene; in other words, it is a chloramine into which the benzoic-acid radicle has been introduced. It is made into a tablet with sodium carbonate and common salt. The tablet thus made is stable, that is, it will keep for a number of months without apparent decomposition.

This halazone is an exceedingly powerful germicide: in a dilution ranging from 1 : 200,000 to 1 : 500,000, it will destroy such water-borne organisms as the colon-bacillus, typhoid bacillus, dysentery-bacillus, and the cholera-vibrio. A small tablet containing only 1-16 grain of this powerful chemical will effectually sterilize a quart of water. Moreover, it is inexpensive. A thousand of such tablets can be profitably sold for a dollar. There long has been a demand for a tablet of this kind, and there is no doubt that it will have a ready sale among travelers, campers, automobilists, in rural districts where well-water is unsatisfactory, and in all communities where typhoid fever and other water-borne diseases are present. This tablet also is likely to be used extensively by soldiers in the field; likewise in commercial and industrial establishments, hospitals, and other large institutions.

Dakin's other discovery is a preparation called by him dichloramine-T. This is very similar, in a chemical way, to chlorazene but containing even more chlorine than the latter antiseptic. It differs from chlorazene, however, in being soluble in certain oils, but insoluble in water, while chlorazene, on the contrary, is soluble in water and insoluble in oil. In other words, dichloramine-T will be employed in all conditions in which an oily vehicle seems desirable. It has the very great advantage of being capable of use in very high concentration; in other words, it may be used from twenty to forty times as strong as the customary 0.5-percent solution of the hypochlorite—without causing irritation.

Dakin and Dunham described this chemical in a paper published in *The British Medical*

Journal, while Dakin, Sweet, Lee, Hendrix, and Le Conte conjointly deal with this substance in a paper published in *The Journal of the American Medical Association* for July 7. This antiseptic is used as a spray in a chlorinated eucalyptol and paraffin-oil solution. It has been employed with success in the treatment of carriers of such germs as the meningococcus, pneumococcus, diphtheria-bacillus, and the like. It has also been employed in the University of Pennsylvania clinic, as well as in military hospitals in France, as a spray for infected wounds. The results obtained have been surprisingly good; in fact, even better than those attending the use of the farfamed Dakin hypochlorite solution.

Dichloramine-T promises to be a worthy twin for chlorazene, each having its special field, each supplementing the other. We believe that they will go hand in hand in general practice.

Great things, in a medical way, have come out of this great war, but, certainly, nothing greater than the results of these studies in antiseptics. In this field, Dakin and his colleagues, especially his close professional associate Dr. E. K. Dunham, stand easily at the head. Their studies promise to be epoch-making, and every day they are opening up new fields.

The science of medicine, as we understand it, has for its province the treatment of disease.

CASUALTIES IN THE MEDICAL CORPS

In an address to the Cornell Medical College Faculty and students about to leave for the front, during the commencement exercises on June 14, Colonel T. H. Goodwin, of the Royal Army Medical Corps, referred to the many erroneous ideas that have been entertained and expressed as to the personal danger run by the medical-service staff. It is just as incorrect to say that, as noncombatants, medical officers run no danger as it is to assert that the losses in the medical personnel in this war have been very severe. The latter idea, especially, has been greatly exaggerated, the statement having been made that 60,000 medical men had been killed. This assertion is especially foolish, if it is considered that the total medical force of the British army was only 12,000.

Nevertheless, it must be admitted that in this war the losses among the medical men are unusually heavy, and an editorial in *The New York Medical Journal* for July 7, in which Colonel Goodwin's address just referred to also appears, mentions the following data that have been received from the British war office at Colonel Goodwin's request. "The total casualties among medical officers of the British forces on the western front, from the start of the war up to the present date (June 25), are as follows: Killed, 195; died of sickness, 52; wounded, 704; total, 964. The total battle casualties (964 less 62) are, 902."

Whatever the casualties among medical men have been, and whatever they may be in the future, physicians are not in the habit of considering their own welfare first or to save their own hides when it is a question of carrying succor to those in need of their services. Physicians are very likely first to do the work they are called upon to accomplish and to think of any possible danger through which they have passed, any risk they have run, afterward.

ALL WORK AND NO — VACATION

Investigations in the English munitions-factories have demonstrated that long-continued physical exertion produces fatigue-toxins, by which the quality of the worker's product is depreciated. This supplies a scientific basis for the labor-union demand for shorter hours—whether the corollary of longer pay is similarly justified, is open for argument. But, here is a point that concerns ourselves: does this fact apply to mental work as well?

Doctor Achard suggests that this development of fatigue-toxins more than likely may be responsible for poor work at times, on the part of physicians. Indeed, can we do our best when our blood is overloaded with the toxic products of long hours of work, loss of sleep, and food snatched when and where and what may be possible, neglect of digestion, worry over critical cases, and all the other difficulties under which the active practician labors?

And we *must* do our best, every time, all the time.

Would that I were a dictator, an autocrat, with powers transcending those of the czar in his palmiest days. I should organize the profession so that every man would have his work to do, none too much, none too little, each that for which he were best fitted; regulate the pay accordingly; arrange so that each man would have one day a week for a real rest-day, the others attending to his duties; also, make each take a week of true, physiologic rest at suitable intervals. Moreover, I should revive the Sabbatical

year of the Pentateuch and send each man out to grass one year in seven, during which time he should go clear *away*—out of reach, see no patient, read not a line of anything, rest his eyes as completely as if he could not read at all, and rest *physiologically*. On his return, an evening with his fellows would put him *en rapport* with all the changes of the past year—and, how he would make things hum when he returned to his duties.

Dreaming? Well, why not?

All good ends can be worked out by good means. Those that cannot are bad, and may be counted so at once and left alone.—*Barnaby Rudge.*

ANOTHER EPIDEMIC OF INFANTILE PARALYSIS IMPENDING?

The epidemic of infantile paralysis that spread through several portions of the country during 1916 not only led to persistent and patient studies with a view to discovering the specific cause of the disease, but also aroused much fear in the public mind that other epidemics might follow. Unfortunately, there does seem ground for such apprehension if we consider that during the fifteen years of 1880–1905 less than 1000 cases were reported in the United States, but that some 20,000 cases are estimated to have occurred during the period of 1907 to 1910, while in 1916 over 12,000 cases were reported in New York State, about 1000 in Illinois, besides the many other states that also suffered severely.

It is quite possible, of course, that within recent years the disease is reported more frequently because it is better recognized; but, even aside from the unusual frequency during 1916, it seems to be a fact that the infection, whatever it may be, has been manifested more frequently in the last ten years than before.

This being so, it is proper to keep in mind the possibility of infantile paralysis again breaking out and to be prepared to take prompt measures in any instance where there is seen a tendency for attacks to occur in numbers.

The Illinois Health News for June contains an interesting and detailed catechism on what we all ought to know about infantile paralysis. A copy of this number will be sent to any Illinois physician asking for it, and probably can be obtained by other physicians also. We urge a careful study of this catechism, since it contains all necessary information in a form in which it can be passed on most readily to our patrons.

Physicians should think of the possibility of infantile paralysis being present whenever the well-known symptoms of the disease are presented, notably in children under five years of age. Among these earlier signs, we may find, especially, irritation of the upper air-passages. There may be restlessness, headache, disinclination to move (confined to, perhaps, only one limb), drowsiness, twitching, backache, pain of limbs when manipulated, stiffness of neck and back, convulsions. There may be fever, sometimes diarrhea, more often constipation, frequently retention of urine. The symptoms denoting involvement of the nervous system, of course, are of particular significance. Children exhibiting such symptoms, immediately must be put to bed, completely at rest, for a sufficiently long period of observation either to establish the diagnosis or to determine the absence of the disease. Pending this observation, other children should be kept away from the patients, because it by no means has been disproved that the disease is contagious.

We wish to call the attention of our readers to this subject, since there might be an afterclap of last year's epidemic, and it behooves us to institute the best-possible treatment in every case that comes to our notice.

THIRTY-TWO NEW CITIES FOR THE AMERICAN TROOPS

The United States Government will build thirty-two absolutely new cities for its new army of one million men, each city being capable of providing for about 22,000 soldiers. These cities are to be called "cantonments." The sites for most of them have already been selected.

Each of the thirty-two cantonments will contain about 2000 houses, living quarters for the men, officers' quarters, kitchens, mess halls, bath houses, storehouses, and all the various buildings needed for housing troops and providing for the varied activities of a big camp, including its amusements. Most of the buildings will be long, one-story structures, with some two-story houses. They will be plain but modern in every respect, and as sanitary as they can be made.

Each town will cover about 720 acres, or a little over a square mile. Most of these towns are already in the process of construction. The one nearest Chicago will be located about five miles from Rockford, Illinois.

Leading Articles

A Sermon for Young Doctors*

By George F. Butler, A. M., M. D., Kramer, India
Medical Director Mudlavia; Kramer, Indiana

EDITORIAL COMMENT.—While he delivered his sermon to youngsters, just about to graduate, Doctor Butler must have had many of us "oldsters" in mind when discussing his philosophy and giving good advice. At any rate, we, all of us, may benefit from his teachings.

I AM glad that I am a doctor, and glad that I have this opportunity of addressing the members of the graduating class of the Chicago College of Medicine and Surgery, who are about to go out into the world as practicing physicians. I wish to congratulate you upon the life-work you have undertaken. As members of the medical profession, you will, by no means, be the "poor relations" of any professional family.

Looking upon you as brothers and members of my own profession, I attempt this address with fewer misgivings than if you were entering the profession of law or theology. Nevertheless, I am conscious of a grave responsibility. It is easy to give general advice—in some respects, specific counsel—yet, we who have long toiled along the thorny path of modern medicine do not always feel assured of our own wisdom, relying at times upon a credulous and forgiving laity to regard with leniency such shortcomings as are proper to the limitations of men; yea, even to physicians.

There are many considerations touching your future which it might be instructive to dwell upon—I shall linger over but a few though. You go from these halls, my friends, equipped to do service to humanity, and, indirectly, to yourselves. Let it never be said of you that your highest ambition implies the reverse of this statement or that you suffer the shadows of your own personality to obscure the clearer light of professional duty and the nobler impulses that should actuate all professional gentlemen.

Some of you doubtless will attain success and fortune; a few will become prominent; a large number must contemplate bravely the levels to which many members of every profession are eventually assigned— a dull, sometimes chilling struggle, and this to be met with calmness, courage, and untiring industry. Still, there are opportunities for everybody. Of course, it is very true that health, circumstances, and luck have a good deal to do with the happenings of each of us.

We can not all be equally talented; still, we can fill the place that God intended us to fill. The crow is not an eagle and no amount of sunstaring will make it one. It is no man's business to ask whether he has genius or not; work he must, whoever he is. Only, he must work quietly and steadily; then the natural and unforced results of such work always will be the things that God meant him to do—and he will do his best. No agonies or heart-rendings will enable him to do any better. If he is a great man, they will be great things; if he is a small man, small things will be the output; but, always, if thus peacefully done, his work will be good and right; if restlessly and ambitiously done, however, it will be false, hollow and despicable. The real work, that is of substantial and lasting benefit to the community at large, has to be done on a mediocre level. It is just as much to be a common soldier in the ranks as to be a general that leads. We can not all be generals.

The demands from what may be considered a general's talent are very great, and the majority of strugglers necessarily, by force of circumstances, must be content to add to the common stock. If we gain nothing more than experience, this generally is paidup stock for some future emergency. Every opportunity is the reward of watchfulness. Experience, no matter of what kind, if only it is weighty enough, always is good ballast in a storm.

We must remember that some people lack intelligence, capacity, and occupy only a

*Doctorate address delivered at the commencement exercises of the Chicago College of Medicine and Surgery, at the Garrick Theater, Chicago, May 31, 1917.

certain place in life, while the good and great and talented have, in many instances, drawn health and heart and brain.

"Is it not possible that each brain is a field where all the senses sow the seeds of thought? Some of these fields mostly are barren, poor, and hard, producing none but worthless weeds; some grow sturdy oaks and stately palms; and some are like the tropic world, where plants and trees and vines seem royal children of the soil and sun. No two persons are equal intellectually or physically. There are no two leaves alike in all the forests of the earth—nor two blades of grass anywhere." But, whether we reach the goal we aspire to or not, we can do the best we can; we can work. If you have great talents, industry will improve them; if you have but moderate abilities, industry will make them better. What men need is, not talent so much, but purpose; in other words, not the power to achieve, but the will to labor.

The Need of a Broad Education

Only constant attention and work will keep you young and abreast of the times. Follow closely the literature of your science and art. Collect a library of your own according to your means.

In this day and age, a professional man should be broadly educated, liberal-minded, skilled, and interested in matters outside of his own sphere of work. A wide knowledge of our common humanity in all its aspects and workings will be of much assistance to you in handling different classes of patients. Such knowledge must be obtained by studying mankind, by mixing with men, interesting yourselves in men's work, and by reading the best books on a variety of subjects. You should be so versatile and well read that you will be able to discuss intelligently religion, politics, political economy, sociology, philosophy, music, poetry, history, literature in all its phases; in a word, your mental scenery should be large and capable of being shifted at will to suit the figures that move on the mental stage of your patients' minds.

A well-stocked library of good books will be of more importance to you, yourself, than its value in aiding you to get into better mental touch with your patients. It will broaden your life. Professional work of any kind tends to narrow the mind, to limit the point of view and put a hall-mark on a man of a most unmistakable kind. On the one hand, are the intense, ardent natures, absorbed in their studies and quickly losing interest in everything but their profession, while other faculties and interest rest in them unused. On the other hand, there are the bovine brethren, who think of nothing but the treadmill and corn. From very different causes—the one from concentration, the other from apathy—both are prone to neglect that reading which widens the sympathies and helps a man to get out of life the best there is.

Are the lofty emotions, the glorious imagery, the sublime speculations, the melodies that have charmed our ear, elevated our thoughts, improved our hearts, ennobled our natures, purified our manner, and thrown rays of sunshine over the dreary and thorny path of life to be dismissed from our contemplation, because they have no obvious and direct relationship to the practical business of our life? Do not encourage the vulgar prejudice against those exalted inquiries that have no apparent or intimate association with your work, but which constitute the charm and poetry of life and exercise a powerful influence upon the intellectual progress of nations, the civilization of the world, and the character, happiness, and destiny of man.

Not only should you be well informed in the literature of your chosen science, but, as I have advised, your library should contain works on science, history, religion, philosophy. We also should have books for simple enjoyment, books over which we can laugh and weep; such as have in them truth, human nature in all its sides, and withal sound teaching in honesty, manliness, gentleness, and patience. We need their great thoughts to stir us anew and their generous passion to warm us hour by hour, just as we need each day to have our eyes filled by the light of heaven and our blood warmed and enriched by the glow of the sun.

Why People Are Deserting the Doctors

It is the opinion of many people that the medical profession is losing caste, that physicians do not, as a rule, have the confidence and respect of the public they had in former years. New cults, such as Christian Science and Osteopathy, have made such rapid progress that a single decade was long enough to make them popular. People nowadays are doing their own thinking. No utterance made by a thoughtful mind and set forth with candor and decency excites either surprise or alarm. The medical profession must recognize the existing conditions and the tendencies of modern thought and govern itself accordingly.

It may well be asked: Why are we losing ground among the people? There are many

reasons, as it seems to me, some of them traceable to faults in the medical profession and some to the public. One reason is, that physicians have been too materialistic. We have been too scientific, if I may be allowed that expression. We have devoted too much attention to the study of disease and not enough to the suffering individual. We have neglected the treatment of ill persons in our effort to make an exact terminologic diagnosis. Some of the most eminent members of our profession have publicly said that little, if anything, could be done in the way of effective treatment of disease; that all that could be done, all that was necessary, indeed, was, to prevent disease, if possible, and, when a person was ill, to make a diagnosis and leave the cure to merciful God. It is by reason of *this neglect to try to do something* to relieve sick people that they are led to turn their backs upon scientific treatment and seek some *quasi* scientist or charlatan or someone or something that promises relief, regardless of the nature of their ailments.

An adequate study of man and the diseases that afflict him takes into account all his faculties and functions, mental and nervous, as well as physical, all his surroundings, the conditions of birth, of parentage, and, hence, of heredity. Man is a complex being, a conscious spark of divinity embodied in matter, and no part of his nature can be neglected or ignored without affecting the whole man in a greater or a less degree.

Medicine as now practiced seems to have little regard for anything beyond man's physical being. Mental, moral, and spiritual diseases by far outnumber those of the physical body. More than half of our diseases are of mental origin, and even countless criminals and socalled defectives of society owe their origin to the same source. Neither politics, civil statutes nor physic will cure all the ills with which mankind is afflicted; for, vicious habits of thought and greed for place, for power, for money, selfishness, etcetera, may be inherent affections of humanity.

The power of mind over matter or, more rationally, the relation between mind and matter, is everywhere being recognized with its true bearing upon life and its various manifestations. And, the uplifting of the human race to higher mental and intellectual planes has already begun. But, man is no more all mind than he is all matter, and Christian Science, mental healing, and such like having their good as well as their evil side according as their exponents are sincere and intelligent or the reverse, have done some good and some harm, and so doubtless will continue to do to the end of the chapter. These cults all present interesting psychologic studies and, if examined fairly and dispassionately, they will prove valuable and instructive.

Physiologists talk learnedly about temperaments, constitutions, and predisposition to crime; philanthropists talk of reform. Education never can correct the defects of birth, neither can restraint or punishment prevent crime nor reform the criminal. Parental conditions have forestalled all these and given to many lives a bias that nothing can change, a perversity that nothing can alter. When once this fact is realized and when also it is realized how all these lamentable conditions can be prevented, then will earth's humanity be other than it is now. He who attempts to study the human, yet, is ignorant of this sad chapter in the history of human nature, will find himself sadly in error.

[*To be continued.*]

Vagotonia: A War Disease*

By C. von Dziembowski, Sen., M. D., Posen, Germany

Staff Surgeon at the Military Hospital, Posen, Germany

THE clinical picture which I am about to discuss is now so frequently encountered in the military hospitals that it needs must engage our earnest attention. I refer to vagotonia, that condition which—thanks to the labors of Eppinger and Hess—has but of recent years become recognized as an independent disease, and which consists in a symptom-complex conditioned by a morbidly increased tonicity in the domain of the autonomous nervous system, that is to say, the vagus, or pneumogastric, nerve.

At the start, though, I want to say that vagotonia is not a new clinical phenomenon; rather, it consists in a vegetative neurosis sharply limited by its symptoms and associated circumstances, but characterized by

*Address delivered before the Society of Military Surgeons of Posen, as printed in the *Therapie der Gegenwart* for November, 1915. Free translation and adaptation by Adolf G. Vogeler, Chicago, Ill.

being the result solely of pathologic alterations of the pneumogastric nerve, and this consisting in an augmentation of its tonus. Consequently, vagotonia is an independent disease, although not infrequently it occurs as one of the factors or complication of some general nervous disease, such as hysteria or neurasthenia.

Vagotonia Explained

In order fully to comprehend what is understood by vagotonia, it is necessary to call to mind the result of the more recent investigations regarding the functions of the vegetative nervous system.

The vegetative nervous system, I need not say, comprises two fundamentally different sets of nerves namely, that of the sympathetic and that of the vagus (pneumogastric). The nerves innervate all the vegetative [independent of the will, automatic] organs of the body, hence, conduct to these vegetative organs all irritations, or stimuli, of whatever nature, affecting them. And, in order to be able always promptly to convey every impinging stimulus, the vagus and the sympatheticus must be in a certain state of tonicity, or tension, or capacity to respond.

However, it must not be forgotten that the systems of the pneumogastric and of the sympathetic nerves exert a diametrically opposite influence upon the vegetative organs. Thus, for example, the muscles of the bronchi contract under the influence of the vagus, while under that of the sympathetic they relax—they antagonize each other. It is clear that any increase in, for instance, the tone of the vagus must result in increased functioning of the vegetative organs in conformity with the action of that nerve, while, logically, the action of the tone of the sympathetic thereby is overcome. Thus, we have here a condition like that among the nerves subject to the will, for, also in the peripheral nerves increased tonicity of a group of nerves causes muscular contraction, with corresponding movement of the joint, while the antagonistic group of muscles is being overcome.

The Hormones

Now let us consider what are the stimuli that elicit this tone of the vegetative nervous system. The most recent investigations have demonstrated that these irritations are produced by substances thrown into the system by the endocrine (ductless) glands, and also by the products of the metabolism of the body. In part, these substances are of a chemical nature, while another portion acts biologically, that is, they are unorganized ferments. And all these numerous bodies generated and acting variously upon the nerves are, collectively, termed hormones. The irritant effect of these hormones, which consists in an augmentation of the nerve tone, is either a neurochemical or a biologic one, according to their respective nature, and, inasmuch as some hormones act upon the vagus and others upon the sympathetic, it is evident that the automatic functioning of the vegetative organs is controlled and regulated by these same hormones.

In addition to the hormones, certain pharmacologic poisons also exert a specific influence upon the tonicity of the vegetative nervous system; a fact deserving of mention, since a knowledge of their action is of importance for the recognition and treatment of vagotonia. The most important of these poisons (at present recognized) are, atropine, pilocarpine, and adrenalin. Of these, pilocarpine increases the tone of the vagus, while atropine diminishes it. Adrenalin also reduces the tone of the vagus, but, in an indirect way, in that it increases the tone of the antagonizing sympathetic and thus overcomes the vagus, even if the tone of the latter be raised at the time.

However, this by no means exhausts all the elements capable of influencing the vegetative nervous system, for, as is well known, the normally automatically vegetative functioning is, to a large extent, dependent upon the central nervous system, that is, the psychic condition, and especially the individual's mood. These different influences upon the vegetative nervous system are best illustrated by the process of sweat secretion. Physical exertion, as we know, tends to the secretion of sweat, and in this we see an expression of a hormone action, that is, an irritation of the pneumogastric (vagus) nerve by the products of metabolism in connection with work of the muscles. So, in the same way, psychic affections may strongly incite sweat secretion, as seen in the perspiration of fear.

Now, if there occurs any disturbance in this normal, balanced operation of the hormones, we, naturally, would look for a corresponding disturbance in the action of the vegetative organs, because of a change, respectively, in the tonus of the vagus or the sympatheticus. But, this is not so; rather, it has been demonstrated that merely temporary disturbances of this kind are corrected by regulatory reciprocal action.

As a matter of fact, pathologic phenomena, as the result of augmented tone of the vagus

or sympathetic, are evidenced only when excessively formed hormones irritate the respective vegetative nervous system and the latter at the time happens to be in a condition of irritable weakness or naturally is inclined to diseases in that direction. In other words, a vagotonia or a sympathicotonia will occur only when the increased or the disturbed action of the hormones irritates an already diseased (pathologic) vegetative nervous system.

Consequently, vagotonia consists in a morbidly augmented tonicity of the pneumogastric nerve, a morbid overfunctioning, a hypersensibility of the same. And this condition finds expression in the fact that stimuli which in the sound nerve elicit only a slight reaction—and this does not come into the consciousness—will, in a diseased vagus, call forth all kind of troubles, such as intolerable pain as well as a long series of marked symptoms.

The Symptomatology of Vagotonia

From what we have learnt, it follows that, aside from the specific symptoms conditioned upon an increased tone of the vagus, vagotonia must exhibit a large number of others referable to a diseased state of the vegetative system, notably the vagus, or pneumogastric. Based as they are, these symptoms must be present in every case of vagotonia.

Starting from the premise that persons of nervous disposition (and this, as we know, the vagotonics are) are, in a certain sense, degenerated, then it will not surprise us to discover in vagotonic subjects certain evidences of arrested development, as, for instance, a strongly arched palate, adherent auricles, asymmetric skull and facial conformation, prominent frontal protuberances, and hair growing low down the forehead. Also, we frequently see widely gaping eyelids—giving the impression of exophthalmos—and, above all, narrow pupils; the faucial mucosa (as Eppinger and Hess already have pointed out) is pale and generally little sensitive; the mucous follicles of the tongue are very prominent; the faucial tonsils frequently are enlarged and ragged.

These patients tire easily, and their musculature is irritable, so that often the Chvostek symptom can be elicited [i. e., unilateral facial spasm excited by a slight tap]. Furthermore, they perspire easily and profusely. Also, there may appear upon the face and trunk, less so on the extremities, circumscribed patches of reddened skin and which may persist for a length of time. Related to this, there is the dermographia, which regularly is met with in these patients, and very pronounced.

The blood-picture of vagotonics is decidedly characteristic and interesting. The eosinophile cells are greatly increased in number; also, there is a relative increase of the lymphocytes and a relative decrease of the polynuclear cells. This same observation has also been made by Korcynski, of Sarajewo, so that this phenomenon may be set down as pathognomonic and, in doubtful cases, an important diagnostic criterion of vagotonia. As a rule, I have found between 45 and 55 percent of polynuclear cells, from 35 to 40 of lymphocytes, and from 5 to 12 percent of eosinophile cells. With Falta, I would explain this state of the blood by the greater development, in these individuals, of the lymphatic elements and in an irritation of the bone-marrow by the hormones, this resulting in increased generation of eosinophile cells.

The general makeup (habitus) of vagotonics varies, but, for the most part they are weakly, although not all too rarely one meets among them stoutly built subjects. Vagotonia is a disease of the young; still, I also have seen those of older age, but, those mostly were instances of recurrence.

Finally, attention should be called to one general symptom of this disease, namely, Aschner's phenomenon, which hardly ever is absent in a vagotonic patient. This consists in a more or less high-degree bradycardia, being produced by pressure upon the bulbs of the cerebellar pons. This effect may appear immediately or after some time, and it disappears only slowly after removal of the pressure.

It is of importance always to try to ascertain whether in childhood there had obtained an exudative diathesis; for, there subsists a connection between these two conditions. In the first place, there is the eosinophilia in both, and then, as Czerny has pointed out, the exudative diathesis is the mother of neuropaths, inasmuch as the frequent disturbances of their health are liable to lead to a faulty bringing-up of such children.

These, then, broadly are the symptoms that almost invariably accompany vagotonia and which most often lead us to suspect its existence. It now remains to consider those symptoms which are directly produced by increased tonicity of the pneumogastric nerve, or, what may be termed the symptoms proper.

[*To be continued*]

The General Practitioner in His Relation to Practical Psychiatry

III. Mania and Paresis

By Leon E. Duval, M. D., Washington, D. C.
Government Hospital for the Insane, Washington, D. C.

EDITORIAL COMMENT.—Doctor Duval very kindly has offered to answer any questions regarding problems treated in this and other papers, that may be asked of him by readers of "Clinical Medicine." Such letters may be enclosed to us and we will forward them to Doctor Duval. His answers will be published from time to time in this journal.

[*Continued from July issue, page 489.*]

Other Differential Diagnostic Signs

TWO neurological signs are present in a large majority of cases at a comparatively early stage. The pupils show, *first a sluggish reaction to light*, later, the Argyll-Robinson reaction to accommodation, with absence of reaction to light. Even earlier than either of these signs is the loss of the consensual light reflex (the dilatation or contraction of one pupil when the other is shaded or exposed to a bright light).

A second sign is the change in the deep reflexes, more especially the knee-jerk. This latter usually is exaggerated, although quite frequently it is entirely absent or it may be normal.

Of great aid in diagnosis, are the examinations of the blood and spinal fluid. The blood-serum shows a positive Wassermann reaction in virtually one hundred percent of the cases. This does not mean that a negative Wassermann test rules out the possibility of paresis, for, we see a number of well-marked clinical cases of paresis when the Wassermann blood-serum reaction is negative.

Of greater diagnostic aid is a spinal-fluid examination. Many general practitioners do not like to do lumbar punctures; however, the technic is relatively simple and the operation calls for but little practice. No danger is attendant on lumbar puncture, except in cases of tumor of the brain or the spinal cord. The practitioner should insist upon an examnation of the cerebrospinal fluid in every case in which there is any suspicion of organic brain disease, luetic or otherwise.

The Wassermann reaction of the spinal fluid is positive in nearly every instance of paresis, although perhaps not quite so constantly elicited as in the blood. It appears quite early in the majority of the cases, although not infrequently it is necessary to examine two or three specimens before our suspicions are confirmed by positive findings.

The cellular content of the fluid is much increased, as a rule. The normal content is less than 10 cells per cubic millimeter. In paresis and cerebrospinal syphilis the cells vary from 20 to 100 or even more. The count runs much higher in paresis than in cerebrospinal syphilis. Attempts have been made to find a characteristic cell-picture for this and other brain diseases, but no positive or reliable facts are as yet available.

The protein content of the spinal fluid also is increased in these two diseases. The globulin content is the protein most usually referred to in this connection.

Recently there has appeared a new test, known as the Lange colloidal-gold test. It is a color-reaction test, the results of which are expressed numerically in a series of ten. There is a characteristic curve of numbers for paresis and one for cerebrospinal syphilis. A characteristic curve for paresis is, 5, 5, 4, 3, 2, 1, 0, 0, 0, 0—that is, a regular curve descending. To repeat, the four characteristic laboratory findings for paresis are: (1) a positive Wassermann reaction in blood-serum and spinal fluid, (2) an increase of the cell content of the spinal fluid, (3) an increase of the protein in the spinal fluid, and (4) a characteristic curve in the Lange colloidal-gold test.

If the first spinal-fluid findings are negative or doubtful, we must examine more specimens, for, not infrequently first findings are negative, while subsequent ones are positive. Similarly there must be two or more negative Wassermann findings in the blood-serum before we say whether or not a luetic process has ever existed. We must not forget, also, that recent antisyphilitic treatment may negative the results of laboratory tests. Moreover, there are occasional cases in which all laboratory findings remain constantly negative, albeit they may be clinically cases of well-marked paresis.

The differential diagnosis of this disease, distinguishing it from tabes, alcoholism, brain tumor, disseminated sclerosis, functional psychoses, cerebrospinal syphilis, arterio-

sclerotic dementia, epilepsy, and so on, often is very difficult. We depend upon the presence of a progressive dementia in a person usually of middle age and presenting characteristic neurological and laboratory findings. The history of the case is of great importance as to the length of the time the patient has used alcohol, whether he has had syphilis, what is his usual mental makeup, and so on. For instance, in alcoholic pseudoparesis the symptoms closely resemble paresis, but upon the withdrawal of the alcohol, the symptoms rapidly and completely disappear. From disseminated sclerosis, we are at times unable to differentiate paresis, though if we have the combination of scanning speech, spasticity, nystagmus, and intention tremor, we are inclined to rule out paresis.

From cerebrospinal syphilis, differentiation is at times impossible. In persons under thirty years of age, we are more likely to find cerebrospinal syphilis, and we must not forget that this disease may give neurological findings which might be construed to be paretic in origin. In cerebrospinal syphilis, speech disturbances, if present, are likely to be more of the nature of aphasia instead of mere slurring speech. Also, if the Wassermann test of the blood is positive, and that of the spinal fluid negative, in repeated specimens, we have good grounds to suspect that the disease is cerebrospinal syphilis.

To distinguish from functional disorders, the diagnosis is based on dementia plus positive physical and clinical findings. Also, in functional disorders, we very seldom see the emotional picture common in paresis. The neurotic pays much attention to his bodily disorders and is greatly concerned over trivial symptoms, while the paretic almost always fails to appreciate that he is ill.

Epilepsy may be suspected when paresis is ushered in by a convulsive seizure, but, the absence of previous epilepsy makes a diagnosis not difficult, as a rule. In arteriosclerotic dementia, we find, in many cases, a picture closely resembling that of paresis. These cases occur in patients over sixty, as a rule, and show advanced arteriosclerotic changes, senile memory disorders, and absence of laboratory findings.

I have indicated in a rather sketchy manner the diagnosis of this disease. Often our cases are diagnosed only after long observation and numerous laboratory examinations. The general practitioner need not feel ashamed if he occasionally fails to recognize a case of paresis, for, even those who are in constant touch with mental and nervous diseases not infrequently overlook this disease in its earlier stages or are unable satisfactorily to differentiate it from other disease-syndromes. Still, the practitioner should make it his object to recognize as many of these cases as possible, and, if he is unable at times specifically to name a mental or nervous disease, he should at least be able to judge whether the case is one requiring institutional care or not.

Paresis thus far has baffled all attempts at cure. A few cases of apparent recovery are on record, but, there is reason to think that they were cases of mistaken diagnosis. In giving to the patient's relatives a prognosis, we must not overlook the remissions which occur in the course of the disease at times. During a remission, the patient may, apparently, return to normal, but we can predict with moral certainty the recurrence of this disease. At times, intensive treatment seems to check its course temporarily, but only for a short time. The only hope we have of lessening the ravages of the disease is, active and prolonged treatment of lues in the early stages. Still better, though, is, to prevent it by not acquiring syphilis.

Juvenile Paresis

A word may be said here regarding juvenile paresis. This affection occurs in children of syphilitic parents, often when one of the parents is paretic. The symptoms manifest themselves beginning with the eighth or ninth year and, in a few cases, as late as the twentieth year. I have now in one of my wards a patient in whom it appeared at the age of nine years and another in whom it came when he was at nineteen. The symptoms differ somewhat from those in the adult, most frequently manifesting themselves as dementia and epileptiform seizures. These patients often are sent to epileptic-colonies, their condition diagnosed as imbecility associated with epilepsy, while careful inquiry reveals that the child's intelligence had developed normally until the disease made its appearance.

The diagnosis is based, as in adults, upon a history of progressive dementia, in association with characteristic neurological and clinical features. The one difference, in the prognosis between the adult and the juvenile form is, that, while the adult seldom lives more than one and one-half or two years after the onset, the juvenile paretic not infrequently lives four or five years.

The methods of treatment include the administration of salvarsan intravenously,

the Swift-Ellis intraspinous treatment or its modification, the intramuscular injection of mercury salicylate; besides a course of potassium iodide, in increasing doses up to as high as 300 grains daily.

We should not neglect treatment on account of the poor prognosis, for, often we can check the course of the disease to some extent. Again, in cases of doubtful diagnosis, if the condition happens to be cerebrospinal syphilis, not infrequently a cure can be effected. I have in mind a case in which paresis at first was suspected, although the laboratory reports were not quite conclusive. Intensive treatment was instituted, and the later findings indicated cerebrospinal syphilis. The man has, for all practical purposes, recovered and now is earning his living, although the laboratory findings still are weakly positive.

As a general rule, paretics should be confined in institutions, the exceptions being in those cases in which the family can afford to hire nurses and will not interfere with the physician's treatment. In the later stages of the malady, these patients are extremely difficult to care for and, as a usual thing, can not be managed outside of an institution.

Moreover, intensive treatment can be carried out much more conveniently in institutions, while also frequent laboratory and neurological examinations can be made, for the purpose of determining the progress of the conditions. In institutions, the patient is in the hands of those best fitted to minister to him, most able to give him the small modicum of relief possible in these cases, and, though it may be difficult to convince relatives, institutional treatment is, in the long run, the most humanitarian one.

[*To be continued.*]

The Third Arm

By B. G. R. Williams, M. D., Paris, Illinois
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EDITORIAL COMMENT.—Although most physicians know something of the limitations of laboratory work in certain diagnostic questions, few, unfortunately, realize its great possibilities in many others. Laboratory aids have become the diagnostician's third, and most powerful, arm. These articles are not intended to belittle the study of symptoms and signs of diseases in this series, for, they are imperative to correct diagnoses. It is hoped, rather, to stimulate more of the laboratory-spirit. Once a shallow pond, the precise diagnostic aids now have become the boundless ocean of medicine. It is not possible to touch more than a few practical laboratory questions in these brief articles.

The Blood

I HAVE been doing laboratory-work for ten years. Ten years ago, medical analyses were done almost exclusively in hospitals or colleges. Now all has changed: the practitioner has seized upon these aids as his own. Ten years ago, there were very, very few first-class medical laboratories; now they are scattered thickly over the country. When I established the first rural medical laboratory, my failure was confidently predicted by my friends. When I began to write for The Clinic and other medical journals concerning the practicabilities of the precise aids, it was more than once suggested that these things were all very well for students and theorists, but that the practitioner would have none of them. Later on, I began to receive letters of inquiry from interested readers, and, still later, articles, by myself and others, on laboratory topics were accepted by medical journals as practical copy. Today, a paper on a laboratory subject demands but little explanation and, certainly, requires no apology; the physician who fails to see anything practical in a discussion along these lines is now regarded as a bit mouldy. Verily, times have changed.

For years, I have been greatly interested in blood studies. I will venture to say that three-fourths of my readers will sit up and take notice at some of the statements I shall make and attempt to prove. Perhaps you have read something concerning the diagnostic possibilities of blood studies; but, did you know that we are now doing many, very many stunts besides diagnosing pernicious forms of anemia, malaria, and leukemia? You should know something of these.

A certain man had been told that he was suffering from a chronic infectious toxemia. He doubted it. The urinary finds were disconcerting to him and even alarming. An examination of his blood showed a very marked iodophilia. Then he was convinced. His trouble was relieved by a surgeon. Iodophilia is very important when it can be demonstrated, and it points very strongly to infectious toxemia. The blood-spread is exposed to the fumes of iodine, and, if it assumes a

peculiar brown staining, that property is termed iodophilia of the blood. We do not know just why this peculiar staining takes place, but, we do know what its clinical significance is.

You will note that I speak of the examination of a blood-spread. Most blood examinations made in my laboratory are studies of spreads rather than of simple counts, and I believe that this is, perhaps, the experience of other laboratories. It is, certainly, true that the maximum amount of diagnostic information comes from a study of spreads, while very little usable knowledge is gained by simple counting. For the above reasons and because most that I shall have to say concerns spread examinations, I shall give the best method for preparing spreads, an art every physician should possess and which at some future time surely will serve him well. It is easily done, and the value of a careful study of a spread cannot be overestimated.

How to Prepare a Blood Spread

The spread film should be thin, so that the maximum number of ideal microscopic fields may be assured. Secure a *large* drop of the uncoagulated blood upon one end of the surface of a clean glass slide. This is spread over the surface, with the edge of another slide, into a thin film, and the excess blood is discarded. In case of error, the dried blood may be washed off with water and the slide wiped clean and dry for another trial. The film is permitted to dry in the air and, when quite dry, the slides bearing such films are wrapped separately in paper or packed in slide-cases. Two films must not touch each other. A drop of blood pressed between two slides is not a true spread and *is not suited for examination*. A drop of blood permitted to fall on a slide or smeared with a stick or the like is not a true spread, and a laboratory-man can do nothing with it. Follow the directions here given.

However, the following are the chief errors made by physicians when spreading blood: (1) They do not use a large enough drop. (2) They try to use up excess. There should be but one spreading and the excess should be discarded. (3) They delay spreading until coagulation begins.

As to Primary, Secondary and Pernicious Anemia

The physician often wonders, when the laboratory-worker reports a case of anemia as "primary," upon just what this opinion was based. I find that this point is very hazy in the minds of most physicians. While a large number of observations with respect to the classification of the red cells are taken into account, still, the *size of the red cells* is considered most important of all in the diagnosis of a primary anemia. In a primary anemia, the size of the cells varies considerably, some of them being too small, but most of them too large; so that a *primary anemia is almost invariably a large-cell anemia*. On the other hand, the secondary anemias are characterized by the presence of many distorted cells, which, however, average about normal in size, the variation being in shape rather than size. Some little experience is necessary in making a decision in some instances. It often is easier to recognize a secondary anemia than one of primary type. First of all, any man specializing in blood-diagnosis not only must be able to recognize normal specimens by normally shaped corpuscles, but must be trained to detect variations in size, even though these be not marked; for, when they can be easily detected, it is a bit late to expect much from treatment.

There also is some confusion among practitioners concerning the term pernicious anemia; and I am ashamed to say that now and then a laboratory-man otherwise well informed will fall into the error of speaking of pernicious anemia as a definite disease (even in texts), whereas, in truth, the term should be reserved for designating the final and hopeless stage of any type of anemia. Either a primary or a secondary anemia may become pernicious at any time, by virtue of the fact that the blood-forming organs no longer are able to supply new cells for those being lost, or else such new cells sent out are anatomically imperfect and physiologically immature for proper functionation.

I contend (and others agree and insist) that this distinction should be made not alone for diagnostic reasons, but because of the therapeutic and prognostic questions often arising. The laboratory-man who terms every primary anemia a pernicious anemia makes a very dangerous mistake and not only does a great injustice to the patient, but also to vital statistics. I have heard, in bitter debate, one participant contending that victims of pernicious anemia sometimes recover, while another argued that according to accepted teaching this can not be true. Both were wrong and confused. I have witnessed recovery of patients afflicted with undoubted primary anemia; however, I am very certain that no case of any anemia,

whether primary or secondary, has ever terminated in recovery after once it had entered the pernicious stage.

Remember that the treatment for anemia is very different from that employed in hemoglobinemia. In the former, we prescribe glycerin and arsenic; in the latter, iron. I insist that a laboratory-man must not be loose in using these terms, for, the careless use of them means therapeutic confusion and perhaps failure.

Significance of the Blood-Cell Picture

Few surgeons understand the real significance of the white-cell and the differential counts, although most of them do have a rather hazy idea that they are important. I venture the assertion that the diagnostic and prognostic information to be gained is quite definite and very easily comprehended and remembered. Now and then, in some medical meeting, I make the statement that a prognosis may be accurately and confidently made from a series of proper blood examinations and a very good idea gained as to what hope surgical interference may offer. I am sure that there are "operators", who can not or will not get the point into their heads, that will arise and deliver themselves to this effect: "Those who want to depend upon blood examinations may do so; but, I will stick to the old standbys to guide me—the pain, pulse, and all those symptoms." No man, though, aiming to be thorough in medicine will talk that way. I have seen physicians depend entirely upon the pulse for a diagnosis of typhoid fever and others to depend upon pulse-frequency for diagnosing early tuberculosis. Just so I know an old farmer who still draws his water with that old oaken bucket and boasts that he will never ride a modern cultivator, that the antiquated walking-plow is good enough for him.

A high total of white-cell count (and it may be approximated fairly accurately by proper methods applied to ordinary spreads) means increased resistance on the part of the patient, while on the contrary, a low total of white cells means decreased resistance. If you do not believe this, make a white-cell count in the case of a person having a fungous disease, where, as we know, vital resistance is below par.

A high percentage of polynuclear cells means increased toxic absorption (from infection); contrarily, a low percentage of polynuclear cells means decreased toxemia.

Read over the two preceding paragraphs several times, then you will have learned the salient principles of surgical blood examinations.

You must understand the foregoing facts if you want to talk intelligently concerning the value of a blood examination in any surgical case. Many a time I have followed the order of a surgeon and made a blood examination as indicated by him, all the time convinced that I was wasting my labors and that the man did not know what he was trying to get at, but, yet, would not thank me were I to call his attention to this fact. The information given above, if applied to any particular case, will give you a pretty good idea as to just how your patient reacts against his infection, how his convalescence is proceeding, besides numerous other valuable points that may be utilized in the therapeutic program. Certainly, you must not overlook the value of pain, pulse frequency, fever, etcetera, but, at the same time do not overlook the blood tests. The data will be noted to harmonize, never be contradictory; although at times one may fail, but then the others may save the day.

If your patient has a low total white-cell count and a high polynucleosis, he is in a bad way. Do not forget that! Examine the blood from day to day. If his total white-cell count is falling or not increasing proportionately with the polynucleosis, you can be assured that he is growing worse. I have made this observation in a large number of cases. It must be accounted a happy day when the patient's polynucleosis begins to fall or the white cells increase, or both happens. In convalescence, the white cells will decrease along with the decrease of the percentage of the polynuclear cells; for, the fever and toxemia gone, the patient has no further need of an increased resistance. The verification of your prediction of probable recovery is evident to the friends, and this will gain you prestige in more than one case. Pay no attention to the fossil who "grandstands it" in the medical society: he ignores the blood analysis because he is blissfully and pitifully ignorant of its possibilities; also, he passes by much valuable information.

A word about the white blood-cells. I have been interested in that condition which may be considered the direct opposite of the polynucleosis, that is, the mononucleosis (or lymphocytosis), sometimes relative, but also absolute, especially in cases of syphilis and tuberculosis. This test has been of great use to me in several difficult diagnostic problems, where other specialists apparently ignored its meaning. I have wondered why

not more emphasis is being placed upon it in medical literature.

Several years ago, a man in these parts became hypochondriacal. At first, insanity was feared; although the evidence was not convincing. A gradual emaciation became apparent. Urinary tests disclosed a mild degree of vascular nephritis to be present, and this grew worse and finally killed him. However, this has nothing to do with my story. A series of blood examinations disclosed eosinophilia, and the man's physician decided to administer an anthelmintic. This brought away a very perfect tenia; thus once more proving the so often forgotten fact that eosinophilia is suggestive of animal parasites.

This paper has touched upon many valuable procedures that the average physician can not carry out, but which must be relegated to experts or at least to those having almost daily experience in blood-work. There are a great many other such tests; the foregoing, however, are some upon which I wished to lay especial emphasis and which may stimulate interest in diagnostic hemanalysis. One who makes only an occasional blood test can not well handle the more intricate problems.

A Few Easy Blood Tests

However, here are some blood tests that are easily executed and which should be carried out routinely by the practitioner in certain cases suggesting their use. In every case of *jaundice* in which operating is being considered, the coagulation-time of the blood should be calculated. This is easily done. Jaundice lengthens the coagulation-time, and, if it extends over six or seven minutes, the patient may die of hemorrhage on the table. Expensive apparatus may be employed for this test, but, a method quite as satisfactory is the "broomstraw" method. The test should be performed in the afternoon, as frequently the coagulation-time is unusually high in the morning. A dozen small drops of blood are permitted to fall upon a clean glass slide, and the time is noted. After one minute, a clean broomstraw is drawn lightly through one of these drops. After another minute, another clean straw is drawn through the second drop. When a drop adheres to a straw and fibrin threads prevent its being drawn through clean, the coagulation-point has been reached. Normally this is five minutes.. Any period over ten minutes is indicative of a very serious state, while any period above six minutes means that operating is not entirely safe. This method can also be applied in cases of hemophilia.

There is also a simple test that is of some value in differentiating a serious anemia and a toxic hemoglobinemia, although it is best to make also the blood-spread examination. A drop of blood is permitted to fall upon a piece of clean white filter-paper. Observation is made before the drop becomes entirely dry and dull. If hemoglobinemia, is present, the drop spreads homogeneously, although it may be very pale. Actual reduction of red cells, however, may be shown when the drop is dark in the center, but shows a pale serum ring at the periphery.

The Relation of Diabetes to Cancer

By Sherwood Dunn, M. D., Paris, France
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AT A RECENT meeting of the Academy of Medicine, my former teacher and present friend Prof. Albert Robin presented a paper[1] upon the subject named in the title, which has attracted considerable attention and may be of interest to the American profession, at the same time serving to create a more general observation of the relationship between these two diseases, so that a wider and fuller aggregation of statistics may be procured for the service of the profession in all countries.

The work and reputation of this savant is world-wide and his published observations command the attention and respect which they rightly deserve.

First: What is the frequency with which cancer develops in the diabetic?

The authors, who have studied medical literature, seeking a reply to this question, have been met with the unsurmountable obstacle that the cases of diabetes reported have presented studies during periods of activity of this malady and that extremely few were followed for a sufficiently long period to observe their later complications or final termination. E. Kappler, in his researches, found but 62 cases in the medical literature up to 1898, and he concluded that

[1] *Journal des Praticiens*, April 14, 1917.

cancer in relation to diabetes is of rare occurrence. Theodore Frerichs, in his résumé of causes of death in 250 cases of diabetes, mentions 6 cases of cancer; which is 2.4 percent. Naunyn, in 400 cases, found 7 of cancer of the stomach and liver and one of the cheek, this being 2 percent. Boas, in 55 cases of cancer of the digestive tube, noted 12 cases as coexistent with diabetes (7 of the rectum, 2 of the esophagus, 2 of the stomach, and 1 of the liver). Professor Robin reported 144 deaths of diabetic cases that came under his personal observation, in 12 of which there developed cancer, or 8.3 percent. In most of these cases, the cancer appeared after the diabetes had been of long standing. He draws the conclusion that cancer is not exceptional in these cases and that diabetes forms a favorable ground for its development.

Second: What is the course of development of cancer in the diabetic?

Robin is convinced that the preexistent diabetes favors a more rapid development of the cancer. In this connection, he cites as an example the case of a woman, 71 years of age, who had suffered from diabetes for six years, passing an average of 103 grams of sugar in twenty-four hours, and who had lost sensibly in weight and strength. Under treatment from May 19 to July 9, the quantity of sugar passed daily fell to 3.5 Grams; she increased 1.25 kilos, in weight, her strength increased, the marked thirst disappeared, appetite improved, the liver became normal.

Until September 12 she remained in excellent health, taking long walks without becoming fatigued. However, from that date, she lost appetite, tongue was coated, conjunctivæ were colored yellow, and strength decreased rapidly. The urine contained 83 Grams of sugar in the daily output. She was immediately put upon her former treatment, which, although reducing the amount of sugar, did not improve her general condition, which gradually became worse. Robin saw the patient on October 2 and was struck with the marked alteration in her appearance. She had the peculiar yellowish-white parchment-like skin characteristic of neoplasm. Her abdomen was greatly swollen; the liver extended down to the umbilicus; there was considerable liquid in the peritoneal cavity; the amount of sugar voided per day was 43 Grams. Her condition progressed rapidly from bad to worse and she died November 1 of carcinoma of the liver, which, seems to have run its course in fifty days.

E. Kappler adduces the observations of Richelot, Verneuil, Gilbert, and others, who found that the development of cancer is accelerated by diabetes.

As an exception to this general form of progress, Tuffier has reported a case in which the progress was slow and the general cachexia appeared late.

In the 12 cases reported by Professor Robin, 5 were very rapid (from fifty days to five months), 4 were rapid (from six to seven months), 3 were slow (2 cases of cancer of the breast of from thirteen to eighteen months' duration and 1 cancer of the rectum, of two years' duration).

Third: Does cancer have a tendency to produce glycosuria?

The author does not believe that cancer exerts any influence in this respect. In the total number of cases he has observed, he found only 2½ percent affected by glycosuria, and then only very moderately so and of transitory character. In one of his cases, with rapid development of cancer of stomach and liver, sugar appeared on December 22, this continuing until the 31st, with a maximum of 6 Grams per day. The patient succumbed January 2.

Brault claimed that in cancer of the pancreas there is a tendency to glycosuria. Nevertheless, in 5 cases observed by Robin, 3 were without it, in 1 case in which the pancreas was transformed into a scirrhous mass, glycosuria showed intermittently with a maximum content of 3 Grams in twenty-four hours. In the other case, with a voluminous cancer of the liver, extending to and involving the pylorus and pancreas, there was evidence of sugar on October 21 and up to November 8, with a maximum content of 1.35 Grams; thus ceasing prior to the death of the patient, which took place November 11.

Professor Robin does not believe that cancer has any favoring influence upon the development of diabetes, except perhaps in cancer of the pancreas, while even in these cases the complication is more likely to be glycosuria than true diabetes. Furthermore, he never has seen any such instances.

Fourth: Where diabetes appears in a patient having a benign tumor, does it have a tendency to transform the tumor into a malignant form?

Two observations recorded by Verneuil would lead one to suspect that diabetes does favor this transformation.

Fifth: What influence, of any, does cancer exercise upon a preexisting diabetes?

The influence is variable.

Boas distinguishes two classes of cases. In the first category, the tolerance for the

carbohydrates is remarkably increased. He cites a case in which for many months the patient voided from 30 to 45 Grams of sugar per day, but, upon the development of cancer of the stomach this fell to between 3 and 7 Grams, and that even when 100 Grams of glucose was injected per day. No appreciable increase of sugar appeared in the urine. A gastroenterostomy disclosed a large carcinoma of the pylorus, and a metastasis of the mesocolon, while after the operation the sugar in the urine fell to between 2.50 and 5 Grams.

In the second category of cases, the diabetes was not affected by the supervening cancer.

Professor Robin divides his observations into two classes also.

In the first class, the supervening of cancer is followed by an increase in the diabetes, as shown in the case of the rapidly developed cancer of the liver mentioned, in which the glycosuria rose from 5.5 Grams to 85 Grams in twenty-four hours. Also in another case of cancer of the liver, in which a daily content of 262 Grams of sugar was reduced to 2.5 Grams by antidiabetic treatment, but at once rose to 18 Grams with the appearance of cancer. In a third case (cancer of the bladder), in which a daily content of 138.8 Grams disappeared entirely under the antidiabetic treatment, it reappeared, with irregular content of from 0.50 to 6.7 Grams, during the evolution of the cancer.

The second category comprises a larger number of cases in which the glucosuria disappeared with the advent of cancer.

In the case of a gastrohepatic cancer of rapid development, where the sugar amounted to 4 Grams per liter, this disappeared with the first symptoms of cancer, and did not reappear. In a case of cancer of the rectum of rapid development, the sugar, which amounted to 10 Grams per day, fell to 1.58 Grams with the advent of the cancerous symptoms, gradually falling to but a trace near the time of the death of the patient.

In a man of 41 who had cancer of the stomach and peritoneum, and who was excreting 94 Grams of sugar per day, which disappeared under the antidiabetic treatment, there was no reappearance of glycosuria with the advent of the cancerous growths. In two women having cancer of the breast, and who voided 43 and 12 Grams of sugar respectively, this was reduced during the early months of the neoplastic growths, and did not reappear after the operation. Then, in a case of cancer of the pylorus, the sugar, amounting to 70 Grams, disappeared under treatment but reappeared with the advent of the symptoms of cancer and continued during its course, in irregular traces not determinable. At the autopsy, secondary newgrowths were found in the liver and pancreas.

From these observations, Robin draws the conclusion that, although in a few cases the glycosuria is increased with the advent of cancer, this is only temporary, whereas, in the majority of cases, the sugar diminishes or disappears entirely, as if the neoplasm utilized the sugar for its own nutrition.

Sixth: Is, in the presence of diabetes, surgical intervention for cancer advisable?

Surgeons are well aware of the complications attendant upon surgical operations in the presence of diabetes, and, so, in deciding to operate, all the circumstances and conditions are thoroughly considered.

In the two cases of cancer of the breast reported by Professor Robin, the glycosuria had practically disappeared before the operation was performed.

In a case reported by Hoffa (cancer of the rectum), the sugar, which had disappeared, mounted to 24 Grams per day after the intervention, this soon increasing to 40 Grams, and the patient died in coma. Th. Landau, Verneuil, and Fuchs have described similar cases. Becker reported a case in which the operation was followed by necrosis and the patient died in coma. Hirschberg reports a case in which the patient died in coma after anesthesia with cocaine.

Of the 17 such persons reported by E. Kappler in which he operated, 9 succumbed, 4 from diabetic coma; 1 had a rapid relapse, with fatal termination, and 7 survived for only a short period, during which they never fully recovered consciousness. Certainly a showing not calculated to inspire confidence as to a favorable outcome in these cases.

Any serious operation in the presence of pronounced diabetic conditions is grave and dangerous and should not be attempted when the urine contains acetonic products. However, the intervention is indicated in the initial stages of a supervening cancerous growth, because of the tendency to its more rapid development in the presence of the glycosuria—provided that the daily excretion of sugar can be reduced to a point when the operator can feel that there is no danger of metabolic intoxication following the operation.

Professor Robin concludes from his studies of the subject that the diabetic subject is liable to the development of cancer and that, when a cancer does form in the presence of glycosuria, it is inclined to rapid development.

A Preliminary Report of the Pathology and Treatment of Narcotic Addiction*

By Charles F. Stokes, M. D., U. S. N., Briarcliff Manor, New York

With keen foresight, the present administration of the City of New York, made operative the Inebriety Law of 1910, by appointing the Board of Inebriety, and by establishing offices in the city and a farm colony in Orange County, for the treatment of inebriates (drug addicts and alcoholics) in the face of much disaffection and some ridicule. The extent of the growing drug evil which, according to the report of the Whitney Committee, has entangled two million victims in this country alone, a national menace of monster proportions, was grasped in its full significance, and has been combated vigorously.

The conditions at the farm colony have made it possible to study the human material involved in this evil, in rural isolation, free from addiction and from the conflicts and temptations of the city. This setting presented the problem stripped of many difficulties, and made relatively easy the study of the cases, that led to the conclusions about to be set forth.

Existing national stress and the passage of the Army Law embodying conscription, have prompted the writer to present this incomplete report in the hope that drug addiction may be lifted out of the vale of empiricism and confusion, so that the problem can be dealt with on sound scientific lines. A detailed report of the studies of over one thousand drug users will follow at an early date.

The enlistment of drug addicts who have been freed of addiction has not been contemplated, but it is believed that, when these individuals are better understood, it will be acknowledged that after treatment of the proper sort they will be able to render efficient service in the war industries, such as agriculture, ammunition making, shipbuilding, and the like. Of the drug addicts seen by us, over 90 percent had no criminal record; 7 percent had been arrested for minor offenses, such as boyish pranks; less than 2 percent had been convicted of felonies. Unless these unfortunates are cared for properly, they will not only remain unproductive man-power of enormous proportions, but possibly something worse under war conditions.

The barren yield of the laboratory and the deadhouse is made clear when we realize that drugs that depress function induce no permanent demonstrable structural change. With no conception of what addiction, narcotism, and withdrawal mean, remedial measures in the past must of necessity have been largely, if not entirely, empirical, each worker striving conscientiously to bolster up his scheme of treatment, on hazy pathology, offered in good faith, but merely adding to the muddle.

Opium, its alkaloids and their derivatives, with few exceptions, depress nervous tissue and slow down function from the cortex to the ultimate ramifications of the vegetative nervous system, here involving the ductless glands as shown by the disturbances in metabolism. Beyond mentioning the similarity between the clinical aspects of parathyroid tetany and parathyroid involvement in some cases of heroin addiction, as shown in disturbed calcium metabolism, strikingly manifested in the teeth, no note will be made at this time of the characteristic features of each type of addiction.

Drug-Withdrawal Made Without Distress

Can we account for the grave condition commonly seen in sharp withdrawal of the drug of addiction in narcotic habituation? We can. Can this abrupt withdrawal be accomplished without distress? It can. Does the general condition uncovered demand after-care? It does, emphatically. Unless the after-care is properly directed and sufficiently prolonged, and the cause of the addiction is determined and corrected, treatment will be of little avail in the majority of cases.

Let us now consider these questions. What are withdrawal symptoms, and how are they explained? It is well known that on the sharp withdrawal of drugs that depress function, we have marked "counterfeit" stimulation, and so it is with narcotics. The wave of "counterfeit" stimulation sweeps from the cortex over the entire nervous system, and is strikingly evident in the preganglionic sympathetic fibers described by Cannon as going direct to the adrenals, there causing a sharp output of adrenin, thus inducing an acute sympathicotonic state, in which the autonomous side of the vegetative

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nervous system, the extended vagus, is inhibited (Biedl, Falta). The clinical picture is that of profound fear so perfectly drawn by Darwin. The wide pupil, pale clammy skin, the heart running to exhaustion, the gaping, sneezing, and other manifestations of respiratory disturbances, with the gastrointestinal tract blanched and motionless—in other words it is deep vagus inhibition that we see, profoundly overshadowed by the sympathetic. An adequate dose of narcotic holds back adrenin, tranquillizes the condition, and the relief is immediate and complete.

The fear complex may also be classed as "counterfeit", for, there is no adequate emotional stimulus in evidence to account for the condition. The writer long ago pointed out the pathology of the withdrawal symptoms in narcotic addiction, and has since endeavored to unearth remedies that would stimulate the extended vagus, the autonomous nervous system, firm in the belief that when this was accomplished and an approach to the normal balance between the sympathetic and autonomous systems could be established and maintained, the patient would be free from symptoms of narcotic withdrawal. This has been amply demonstrated in a series of 130 cases made up of opium, morphine, heroin, and codeine users.

Pilocarpine and Eserine Meet Indications

After a thorough trial, the ductless-gland products were discarded, as too slow in action to combat so sharply acute a condition, even where they were reputed to be pronounced autonomic stimulants. It was found that in pilocarpine and eserine [gr. 1-60 to 1-90] we have two remedies that meet the indications perfectly, in doses far below the minimum medicinal doses in common use; for example, the largest single dose of pilocarpine hydrochloride that has been given by me was 1-10 of a grain, with the average dose somewhere between 1-15 and 1-20, repeated every two or three hours for the first forty-eight hours, after which the medication is discontinued as a rule.

Soon after the beginning of treatment, the face becomes flushed, the pupils narrowed, ptyalism and sweating are induced, the heart action is slowed down, gastrointestinal peristalsis is established, the gall-bladder is emptied, the intestinal glands function actively, the bowels move, and the patient is hungry. Refreshing sleep often follows the first dose; indeed, patients often have to be aroused for their medication; they are perfectly tranquillized. If the saliva is swallowed they are apt to be nauseated.

While cathartics are sometimes given, they are not always necessary, and should under no circumstances contain any of the hyoscine-atropine group, which is absolutely contraindicated in this condition. If the pulse is slowed down unduly, it is better to cut down the amounts of pilocarpine and eserine, rather than to lengthen the interval beyond three hours, or stop the medication altogether, for, if this is done, naturally the patients will show withdrawal symptoms. It is better then to give 1-8 of a grain, or even 1-4 of a grain of morphine, and a half hour later begin the treatment anew, giving the two remedies in reduced doses. These small doses of morphine merely hold back adrenin, in addicts, and cannot be regarded as narcotic. All food, in fact, everything by mouth is withheld for some hours, in order to avert antiperistalsis.

No Untoward Symptoms

There have been no untoward symptoms in any case in this series, which has included valvular and myocardial disease of the heart. One patient, a physician, 76 years of age, 40 years an addict, whose wife reported that he had been taking 130 grains of morphine a day, was taken off abruptly without incident. In this case, however, some days later, the patient had outbursts of rage without provocation, and was irritable and impatient. He was treated under crude and unfavorable circumstances, which materially interfered with the adjustment of his nervous system to the problems of reality that had passed him by during his long period of narcotism. While his general physical condition improved, on account of his surroundings and his advanced age it was deemed wise to give him the amount of morphine that would tranquillize him, which was found to be 3 grains. He can be taken off under more favorable circumstances without doubt. Other elderly patients treated in my private hospital have done well.

Psychic shocks or unfavorable emotional stimuli of one sort or another are likely to disturb the nice balance in the vegetative nervous system, and throw the patients into withdrawal symptoms, in fact, I have many times deliberately brought this about.

For the Insomnia

As the patients are apt to be wakeful the second night, it is customary to give veronal in divided doses, beginning the afternoon of

the second day of treatment. All craving ceases after the treatment is under way, and the patients cannot tell when the narcotics are discontinued. The picture reminds one of that seen in the crisis of pneumonia; it is one of complete tranquillity. Unless the physician has a clear understanding of the pathology of the condition as herein outlined, and the indications for the variations in treatment, he will be likely to be disappointed in his results.

It is interesting to observe the types of minds uncovered in this way; in fact, in some cases the underlying factors in the cause of the addiction—and there are always underlying causal factors—stand out strongly in evidence. The common type of mind is that of an older child, a mind neither hardened nor matured through contact with reality. The physical damage in these cases is soon corrected, for, we rarely see complicating organic lesions of consequence. The readjustments in the nervous system take a longer time. It has seemed to me well worth while to explain as far as possible just what is taking place, so that patients can cooperate, and will understand that the readjustments at the psychic level are often tedious and sometimes disappointing. Frank problems in psychiatry must be solved before we can hope for permanency of recovery. Mental and physical fatigue is to be avoided. Strychnine, tea, and coffee should not be given. It may be that in the Abderhalden reaction we shall find a good indicator to guide us in the niceties of after-care.

By robbing the condition of much of the dread of suffering, this plan of treatment appeals to addicts, and they soon realize that convalescence begins at once instead of being dragged out unduly through gradual reduction and other methods that supplant one poison with another. Sufficient time has not elapsed to make any definite predictions as to permanency of freedom from addiction; still, the outlook is most promising, particularly if the patients will seek new surroundings and associates, when they resume their former occupations. In the majority of cases the relapses are due to their returning to their old pals and old haunts, where they are soon beset by the insistent drug sellers.

Heroin should be abolished. We found that this drug was used in over 90 percent of the cases seen by us. Heroin can be completely done away with without adding to the suffering of the sick or harming them; in fact, the United States Public Health Service, in view of the drug evil, has discarded heroin completely, and will take steps to have legislative measures enacted that will further meet this distressing situation.

While the pathology of alcoholism differs from that of narcotic addiction, there are emotional manifestations in this disease that can be tranquillized by playing up the autonomous nervous system. We have seemed to avert delirium tremens in some cases in this way. Is not this perfectly understandable, if, as suggested by Crile, we are dealing with profound exhaustion of all levels down to the self-preservative, in which the victim battles with reptiles and other animals, until the curtain falls?

Nonoperative Gynecology

The Abortion-Habit

By William Rittenhouse, M. D., Chicago, Illinois
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[*Continued from July issue, page 506.*]

The Abortion-Habit

IN USING the term "abortion-habit," I do not refer to the woman who has induced criminal abortion upon herself so often that she may be said to have formed the habit, nor, yet, to the doctor or midwife who has yielded to the temptation to make money in this illegitimate manner until it has become habitual. What I intend to discuss now is a class of cases which, while not very frequent, nevertheless are met with sufficiently often to constitute somewhat of a problem in the practice of the gynecologist.

All of us have met the patient who is desirous of having children, but, who despite every precaution taken finds every one of her pregnancies terminating prematurely. Most commonly she aborts within the first three months, although sometimes a pregnancy will continue to the fifth or sixth month. I recall one case in which the woman had fourteen abortions, not one of them

having attained to the fourth month. She was a hard-working housewife of German descent and apparently perfectly healthy. I could not learn of anything that would suggest syphilis, and it was before the days of the Wassermann test. Under alterative treatment (small doses of mercury, with tonics), I brought her fifteenth pregnancy to full term and she bore a healthy child.

Another patient, in the first two years of her married life, aborted six times at about the second month of pregnancy. Her seventh pregnancy went to full term under almost constant use of viburnum prunifolium.

The term "habit" often is used in connection with cases of this kind, because it seems as if in the case of some wombs abortion occurs more and more easily the oftener this happens. until eventually a true habit is established. Something of this sort is occasionally seen in the behavior of other organs; for example, an emesis-habit is sometimes established by the stomach. I have seen at least two persons who could evacuate the stomach at will. In both instances, this condition apparently had been brought about by persistent vomiting in consequence of some gastric disorder.

The etiology, when there is a tendency to abort on the slightest provocation, nearly always undoubtedly is of a specific origin; still, there certainly are cases where neither the history nor the Wassermann test reveals any taint of syphilis.

A misplaced uterus, especially when retroverted or retroflexed, may be the cause of repeated miscarriages, but, here the cause is so apparent and the indication for its removal so plain that it scarcely belongs to the problem under consideration.

In making a diagnosis of the true nature of these cases, the Wasserman test should be applied whenever possible; for, although it is not absolutely reliable, sometimes indicating the existence of syphilis when it is not present, or, still more often, failing to give a positive result where lues is present, it, nevertheless, is the nearest approach to a reliable diagnostic means at our command.

Treatment of the Abortion-Habit

When a woman having the abortion-habit shows any evidence of specific taint, we may confidently look for good results from a course of antisyphilitic treatment. Even when the origin of it is in doubt, it is good practice to prescribe small doses of mercury, with tonics—the socalled "alterative" treatment that was much more commonly used a quarter of a century ago than it is today' and the abandonment of which I believe to have been a distinct loss. There are many chronic conditions of ill-health that are promptly benefited by such a line of treatment.

The term "alterative" suggests the general character of the treatment, namely, one tending to alter the bodily conditions, especially with reference to elimination and nutrition. Mercury, iron, arsenic, iodine, sodium, and potassium were the chief drugs employed. The dosage of mercury and of iodine for this purpose was distinctly less than that employed in the treatment of syphilis. In this treatment, 1-10 grain of the protoiodide of mercury or 1 or 2 grains of the iodide of potassium daily combined with tonics, such as iron or strychnine, were found to give better results than the tonics alone.

In the abortion-habit, I have almost invariably had good results from such a course of treatment. The only other remedy that has proven of value is viburnum prunifolium. This should be given in the form of pills or tablets, as the liquid preparations soon cause the stomach to rebel. However, whatever course of treatment is adopted, it must be continued for some time, as it will take months, rather than weeks, for results to show.

These cases of abortion-habit are worthy of the most serious study by the profession. We see so many instances of women trying to avoid the duties and responsibilities of maternity that, when we find a few who are really desirous to fulfil those duties, we ought to give them every assistance in our power. For a married couple to look forward to a childless old age, is, to face a calamity the magnitude of which is not usually appreciated until it is too late. Those of us who have practiced medicine for a generation can recall families who in the first years of their married life did their utmost to avoid having children, but, who, when the childbearing-period had passed, saw their folly and would have given everything to have a family of sons and daughters to lean upon in their declining years.

The Diagnosis of Pregnancy

The gynecologist is so often called upon to diagnose between the various forms of tumors and pregnancy, that it may not be out of place here to say a few words on this subject. For, mistakes in diagnosis occur so frequently and are capable of causing so much embarrassment to the doctor and of

bringing so much opprobrium to the profession that no amount of care and painstaking can be too great to bestow upon the decision of this important question.

A few years ago, I was consulted by a woman and her family-physician, the latter, four or five years before, having called me to assist him in the delivery of this woman's first child. She had always been irregular in her menstruation and latterly had grown quite stout. At this time, she had not menstruated for ten months. She had believed herself pregnant and had imagined having morning-sickness and feeling fetal movements. The physician, though, was not fully convinced, and when the time for delivery arrived and nothing happened, he took her to a gynecologist of considerable reputation, for examination. This specialist confirmed the patient's diagnosis of pregnancy and advised her to get busy on her baby-clothes. By this time, she herself had become somewhat unsettled in her conviction and insisted on getting my opinion.

I found a vast amount of abdominal fat and a very much subinvoluted uterus, but not the least sigh of pregnancy. The condition was not at all difficult to diagnose, and I quote it here for the purpose of emphasizing the need of everlasting vigilance and thoroughness in examination. The specialist in question was an able man, but he was very busy, and the only way in which I can account for his blunder is, on the supposition that he allowed himself to fall into a perfunctory routine of hurry.

Under appropriate treatment, this patient was restored to a normal condition; however, some two years later, she consulted me again and said that the amenorrhea had returned, but that the same treatment as before, given her by her doctor, had done no good this time. After making an examination, I informed her that she would need baby-clothes in a week or so—and she did. Now, in this second instance, it was the family physician who was guilty of careless examination and of taking things for granted. This again emphasizes the need of making frequent and thorough examinations. Many an obscure and baffling condition finally will become clear if only the doctor will continue to examine and refuse to accept defeat.

Despite the advancement of modern science in the diagnosis of pregnancy, we still are mainly dependent upon the methods that have been in use for generations; namely, the use of the trained ear and the trained touch. The x-ray is of little value until ossification of the fetal bones is so far advanced that the diagnosis can be made by other means. The Abderhalden test is subject to possibilities of error that render it too uncertain to become practical.

Some Practical Hints

It is not necessary for me to describe here the various signs of pregnancy; they may be found in any textbook on obstetrics. It is worth while, though, to remember that, in making a vaginal examination, the index-finger can reach considerably higher if the patient is placed upon her side, because then the perineum can be pushed back toward the coccyx. This is especially important in attempting an early diagnosis, when so very much depends upon the shape and consistency of the lower portion of the uterus.

For palpation of the womb through the abdominal wall, the patient should lie upon her back, with her knees drawn up.

In especially difficult cases, the woman should be examined under anesthesia, and, if necessary, the whole hand should be introduced into the vagina. Of course, if this is done, great care must be exercised not to inflict injury. The dilatation must be made very slowly, so as to avoid laceration of the perineum. As a rule, it is best not to make the attempt in a nullipara.

When conditions are especially favorable, it sometimes is possible to make a fairly positive diagnosis of pregnancy as early as at two months, although ordinarily one may be satisfied with himself if he can find conclusive evidence some time during the third month; and it is not so rare when the most skilled gynecologist may be baffled up to the middle of a pregnancy. Failure to make a positive diagnosis during the latter half of a pregnancy is attributable, as a rule, to lack of thoroughness. Even when the ordinary signs do not seem conclusive, the x-ray usually will settle the matter.

The recognition of fetal heart-sounds is, of course, conclusive; still, too much importance must not be placed upon their seeming absence. I have seen many a pregnancy in which I could not discover the sounds. Fetal movements detected by palpation, if unmistakable, also are positive evidence; however, they are liable to be simulated by muscular tremors, movements of gas in the bowels or by wilful attempts, on the part of the woman, to deceive.

The placental souffle is fairly reliable. It is said to be present in certain tumors, but this is extremely rare, so that its presence may

be regarded as very nearly conclusive evidence of pregnancy.

The Value of Drugs in Gynecology

A number of readers of CLINICAL MEDICINE have written to ask my opinion as to the value of drugs in gynecological work. There seems to be a somewhat general belief that medicine can not accomplish results of much value in those conditions that come under the notice of the gynecologist. That this idea should prevail extensively in the profession, no doubt is due in part to the quackish exploitation of certain drugs in the advertisements of various patent medicines.

It takes some breadth of mind as also moral courage to admit that there may be real value in a remedy that has been degraded by the quacksalvers. A famous preacher once said, on the subject of church-music, that he did not propose to let the devil have all the good tunes. So, similarly, it would be poor policy to refuse to avail ourselves of a valuable drug simply because it has been found in bad company.

My estimate of the field for medicine in gynecology may be gathered from the preceding articles of this series; but, it may be well to summarize the matter here for convenient reference. The list is short, but valuable.

First in importance, both as to frequency of indication and results obtained, I would put the combination of valerian, sumbul, and asafetida (*Baer's sedative*) for the disorders of the menopause, and for hysteria and other nervous conditions. The interest in this remedy felt by your readers is shown by the large number of letters I have received, both of a questioning and commendatory nature, since the publication of the article on the menopause, printed in the June issue. page 449.

Second in importance I would put viburnum prunifolium, in dysmenorrhea, abortion, amenorrhea, and sterility, especially when the two latter are due to nondevelopment.

Next I would place ergot, in the form of ergotin, in menorrhagia and metrorrhagia.

Finally, the various tonics are valuable in anemia and debility incident to many uterine disorders.

The Problem of Senility

By A. L. BENEDICT, A. M., M. D., Buffalo, New York
Editor, "Buffalo Medical Journal"

EDITORIAL COMMENT.—The problems involved in the recognition and treatment of diseases observed in the senile are peculiar to themselves in many respects, in so far as the senile organism responds to disease causes differently from the growing child-organism and the vigorous adult body. A study of the causes and nature of senility, therefore, is essential for a true understanding of these problems.

[*Continued from July issue, page 492.*]

Senility Defined

THIS is a good time to call attention to the fact that no definition has been given of senility. In general, there are two kinds of definitions; in one, a concise description of a condition is made; in the other, a statement is made that applies to the condition, one which can not be criticized as incorrect in any detail, but which conveys no conception as to what the condition really is. The writer has not seen and is unable to formulate a definition of the first kind which he would consider correct, and it is scarcely worth while to juggle words into a definition of the second kind.

While, of course, acknowledging that arteriosclerosis is, in a sense, characteristic of senility and that there is some truth in the statement that a man is as old as his arteries, it may still be questioned whether a definition of senility can properly be made on this basis. The writer knows several persons past 90 who apparently are quite free from arteriosclerosis. On the other hand, various forms of arteriosclerosis, even when eventuating in death through, apoplexy, say, do not in the least produce the general appearances of senility.

It must be admitted that arteriosclerosis and its accompanying lesions and results are usually of slow development, seldom occur very early in life, and become relatively more frequent with the lapse of time; but, if we analyze the expression "as old as his arteries," it really means, "as near death as the residual resistance of the arteries." In a great many instances, death resultant mainly upon arteriosclerosis no more resembles the ending

of old age than does a traumatic death from hemorrhage—and there is, really, a considerable degree of analogy. To say that "a man is as old as his arteries," is about as correct as to say that a soldier is as near old age as he is to the first line of trenches. Senility, of course, implies the nearness of death, but death, in itself, by no means implies the prior development of a condition that can properly be considered senile.

Without considering in detail any of the other lesions or functional states commonly encountered in old age, it may be questioned whether any one or any combination may be taken as the basis of a definition. Several of these—as, arteriosclerosis, interstitial changes of the kidneys, liver or other organ, the tendency to excess of fibrous tissue in general and to deposits of calcium salts, secretory failure, as of the stomach or thyroid gland or the more superficial characteristics seen in the skin and hair—are, as already intimated, usually of gradual and quite slow development and, hence, tend to accumulate more and more markedly as age advances.

But, it may be held that a person may be senile in the absence of any one of these conditions and that any one of them frequently may occur in middle life and occasionally quite early, without in any sense rendering the individual senile, except as we confuse senility with the nearer and nearer approach of death. This point may be made clearer by reference to cancer.

Cancer is even rarer in early life than are many of the conditions more or less characteristic of senility, and its incidence depends even more closely upon a certain degree of age; but, except in a sense almost, if not quite, as superficial as when we say that we feel old, because of some transient fatigue or illness, it does not in the least express the general conception of senility. Furthermore, despite considerable misapprehension that cancer increases regularly with advancing age, it is not a disease of the strictly senile period at all, but, rather, of advanced middle life. For example (see the writer's article in *The Medical Record*, April 18, 1914), less than 1 percent of the deaths in any age-group below the age of 24 are caused by cancer; the mortality on the same basis, gradually but with increasing rapidity rises to 12.25 percent for the age-group 55 to 59, and then falls to 8.58 percent for the group 70 to 74, and thereafter declines steadily; so that, if we may say that a certain age-period is almost necessary for the development of cancer, it is just as true to say that actual senility protects from cancer. The general question may be raised whether the various diseases and conditions commonly associated in our minds with senility and from which we rather expect old persons to die are really any more definitely connected with senility than is cancer.

Old-Age Diseases and Real Senility Not Connected

So far as the writer has been able to ascertain from direct and indirect observation, the histologic changes as well as the functional disturbances commonly found in the aged do not, if considered seriatim, differ from such as may develop from well-established etiologic factors not directly concerned with age; though, of course, many of them are rare at early ages, and, numerically, all become more and more frequent as age advances. But, we must remember that any effect becomes more frequent as lapse of time affords greater and greater chance for causes to occur.

As has been stated, it is very doubtful whether any single condition is essentially characteristic of old age. Perhaps this point may best be illustrated by taking as examples comparatively superficial characteristics, not of themselves of serious import: white hair, baldness, loss of teeth, wrinkles. Any of these may occur early in adult life without even suggesting senility, while any may be lacking in persons obviously senile. The fact that these illustrations are not fallacious is apparent when we consider arteriosclerosis and its results, interstitial nephritis and hepatitis, achylia gastrica, thyroid failure, and, to the best of the writer's belief, any other serious supposedly senile disease. Even the characteristic mental limitations of senility are, to a large degree, imitated at far earlier ages. A transient illness or crippling or confining a person to the room or house for a few weeks will, often, produce the same inability to keep track of the passage of time and to remember recent events, while retaining the memory of the more distant past, that is supposed to be one of the chief mental peculiarities of old age. Almost any busy person forgets persons, confuses the living and the dead outside of his immediate daily acquaintance, is absentminded, repeats stories and questions, loses absolutely the memory of quite important and striking occurrences, misspells common words, makes blunders in bookkeeping, to a degree nearly, if not quite, equal to that supposed to be characteristic of old age. As to the proverbial inelasticity of the senile intellect, how many adults of, say, 40 are capable either of taking

up a new study such as is complacently put before a high-school student or even of recalling their onetime proficiency in a study which they have "passed" but forgotten?

From one point of view—or, rather, from the many points suggested by considering the duplication at an earlier age of conditions more or less generally regarded as characteristic of senility—one is tempted to regard it as a gradual collection of residual results of disease. But, this conception is untenable, on theoretic grounds; for, we must admit the inevitableness of old age if nothing of an abnormal nature happens to prevent its development, and the equal inevitableness of death, within certain age limits, for any organism. So, too, both clinically and by necropsy, we frequently find that old age has been reached with none of the serious developments present that supposedly are characteristic of it, and we must face the dilemma, in making out the death-certificate, of either recognizing senility, undefined and imperfectly conceived, as the essential cause of death or of seeking a fallacious reputation for accuracy, by ascribing the exit to some trivial and inadequate lesion or shock.

Fibroid and calcareous changes may be stated to be the only adequate general characteristics of senility that can not be considered as the residual evidence of disease in the ordinary sense. It is extremely difficult, if not impossible, to put the idea intended to be conveyed into proper language. Such changes are usually classified as degenerations, and, hence, are strictly pathologic. However, it is significant that it is virtually impossible, on any tolerable diet even artificially prepared, to prevent the gradual accumulation of an excess of calcium and, perhaps, of magnesium, combined with certain acid radicles, in the system. Thus, in the course of a long life, calcareous changes must occur without any definite and immediately recognizable pathologic phenomena. Cholesterine is stated to be the only substance which, experimentally administered in excess, produces lesions closely resembling those of arteriosclerosis spontaneously developing. As this is an inevitable product of metabolism, there must be a similar tendency toward fibroid changes. But, as already stated, even at advanced years, neither of these changes may exceed what is quite frequently seen at much earlier ages.

[*To be continued.*]

On Summer Eruptions

By E. A. Fischkin, M. D., Chicago, Illinois

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UNDER the above heading, we may include quite a number of dermatoses that make their appearance in the hot summer months and which are directly or indirectly owing to the effect of the heat and strong sunlight.

The effect is two-fold: it may consist in the direct influence of the chemical (ultraviolet) rays of the sun on the unprotected skin, producing an alteration in the function of the vascular system of the skin (erythema solare), or it may produce an alteration in the pigmentary function of the skin (ephelides and chloasma), or the heat-rays may produce a change in the perspiratory function of the skin (miliaria and hydrocystoma). The actinic action of the sun's rays may produce a still deeper action upon the skin and cause necrosis of the deeper tissues (hydroa æstivale).

Another group of skin diseases, which may occur at any other time of the year, will be found to be aggravated or more easily provoked in the hot summer months, either because the original pathologic condition has made the skin sensitive, rendering it more vulnerable to the action of the actinic rays as, in *pellagra and xeroderma pigmentosum*; or, the increased heat may be responsible for the decomposition of existing pathologic secretion (bromidrosis), which may become aggravated in summertime. To this change in the secretion, is also due an inflammatory irritation of the skin affected by it, erythema intertrigo, or, decomposed excretions may be responsible for irritation of the affected parts: eczema of the napkin-region in children, which we see more frequently in summer. The increased moisture making the skin a better soil for invasion of microorganisms is also responsible for the larger frequency of superficial staphylococcic infections in the hot summer months.

The direct influence of the heat may produce, also, an increased irritation of the sensory nerves of the skin, pruritus æstivale,

as also disturbances of metabolism that give cause to urticaria-like eruptions, especially in children, and which are seen in large numbers every summer, mainly in dispensary practice, namely, lichen urticatus.

Finally, we may consider skin diseases that are the result neither of light nor of heat, but which are contracted in summer, because their producing agents are set free at this season of the year, for instance, bites of fleas and mosquitos, and poisoning from various plants, especially, rhus toxicodendron.

As we see, there is quite a large number of distinct skin affections that may be observed in the summer and directly or indirectly caused by the season; but, there is not one condition to which we can give the collective name of "summer-rash"—a term so common among the laity and even some medical men. If a summer-rash it is, it must be diagnosed and designated by its proper name, if we want to come to an intelligent and scientific method of treatment. Summer rashes there are many; but each rash represents a distinct disease, the nature of which the physician must know if he intends to treat it.

Erythema solare (sunburn)

Prolonged exposure of the unprotected skin to the sun will produce an erythema of more or less severity and of different degrees of injury to the skin. In the milder forms, there is more or less severe burning and swelling, with intense redness, which becomes better in a few days. After two or three days, most of the symptoms of inflammation have subsided and there remains only some desquamation, which is followed by pigmentation, in the attempt of nature to protect the skin against further action of the actinic rays; so, when it has become tanned, the liability to sunburn is greatly decreased. Hence, brunettes are less liable to suffer than blondes, while negroes are almost exempt.

In severer cases of sunburn, the skin becomes very edematous, the exudative inflammation producing a vesicular or bullous dermatitis of various degrees of severity. These severer forms of exudation usually are encountered in individuals whose skin has become sensibilized through drugs, such as quinine, or through alcohol. A sunburn may also lead to serious consequences when it is accidentally complicated with some other injury to the skin, such as an accidental wound, insect bite or a drug-dermatitis.

The action of actinic rays on the skin-tissue is manifested histologically in dilatation of blood-vessels, serous infiltration of the epidermis, abnormal keratinization (parakeratosis); in severer degrees, serofibrinous or cellular exudation, mostly with admixture of red blood-corpuscles, swelling of collagenous tissue and of epithelium, detachment of epithelial layers, and formation of bullæ; in the most severe cases, thrombosis in the blood-vessels of the cutis.

In the milder forms of sunburn, no special treatment is necessary; even the somewhat severer burns, in which slight exudates (small papules and nodules) appear on the erythematous surface, pass away on the application of a mild, soothing remedy, such as the calamine-lotion, with the addition of a little menthol, if there be itching. If, however, it comes to edema and formation of bullæ, the treatment required is that applied in regular burns of like degree: astringent applications, such as dressings with solution of aluminum acetate, about 3 tablespoonfuls to 8 ounces of water; or carron-oil, with addition of 3 to 5 percent of ichthyol; or protective and antiseptic ointments. The bullæ have to be opened aseptically and kept dry with powders. Despite most careful attention, the healing often is protracted, and sometimes hyperesthesia persists for months.

Ephelides (Freckles)

The hypertrophy of melanotic pigment that characterizes ephelides occurs on the face, the arms, and whatever parts have the skin exposed to sunlight. The color of freckles depends a great deal upon the color as well as complexion of the one affected by them; in blondes, freckles are light; in brunettes, darker; in negroes, black.

Histologically, freckles are the accumulation of melanotic pigment in small circumscribed areas confined to a few papillæ, though no changes are noticeable in the capillaries and no obvious connection exists between the pigment and the circulatory or the nervous system of the skin. They occur mostly in children and young people and may be a source of considerable worry to young women.

The treatment of ephelides gives only temporary relief; a permanent cure cannot be achieved. It is possible to remove the pigment, but, exposure to the sunrays, especially in the hot summer months, will cause a new production of pigment. The object of treatment is, to remove the deeper layers of the epidermis in which the pigment is located. This can be done by means of exfoliating agents. The one most commonly

employed is, mercuric chloride, as in the following:

Mercuric Chloride	Gm. 1
Alcohol	Gm. 25
Water, enough to make	Gm. 100

The skin first is cleaned with benzin or alcohol, then the lotion is dabbed on several times a day till a mild dermatitis is set up. The lesions soon can be peeled off. Care should be taken to avoid an acute dermatitis, which may aggravate the condition, instead of improving it. Instead of lotions, ointments may be used. Example:

Ammoniated mercury	Gm. 3
Bismuth subnitrate	Gm. 3
Cold-cream	Gm. 50

The ointment is to be used for several days until a slight dermatitis has set in, then soothing lotions or powders must be applied. All these methods work but slowly and have to be repeated many times. Much quicker results are obtained by the resorcin peeling-paste, for, resorcin has the peculiar faculty of lifting the pigment from the lower basal layer of the epidermis (chemotactic influence) and bringing it up into the upper prickly layers, which are easily removed by the ensuing exfoliation. To avoid acute dermatitis, the amount of resorcin has to be increased gradually, starting with a 5- or 10-percent strength, and after two or three days increasing 10 percent daily up to 40 percent. The blackened and mortified upper epidermic layers then become loosened from their base. An adhesive zinc-oxide plaster is then applied for a day, when, upon its removal, the mortified epithelium, which contains all the pigment, comes off, leaving a clean pinkish skin.

The full action of the resorcin is secured if it is incorporated in a drying paste, and, for this reason, the pasta zinci vulgaris (zinc oxide, 24.0; fuller's earth, 4.0; benzoinated oil, 12.0; benzoinated lard, 60.0) is used as a base. Ichthyol is added to make the mortified resorcin-membrane more elastic, so that it may come off with the plaster, mask-like, in one piece. The formula of the resorcin peeling-paste is:

Resorcin, finely pulverized, Gm. 5 to	Gm. 40
Ichthyol	Gm. 10
Vaseline	Gm. 10
Pasta zinci vulgaris, enough to make	Gm. 100

Hydroa Aestivale (Recurrent Summer Eruption)

This rare affection, first described by Bazin and later by Hutchinson and others, is a recurring summer eruption, affecting children, mostly boys. It first appears at the age of 2 or 3 and usually subsides following puberty. The lesions appear in crops and consist of pinhead to pea-sized vesicles; or as small accuminate papules, which undergo vesiculation, and usually are confined to cheeks, ears, nose, and the back of the hands; that is, those parts exposed to sunlight. There may be some itching, but, as a rule, subjective symptoms are slight or entirely wanting. The duration of an individual vesicle is from two to seven days. At the end of that time, the lesion, which often exhibits more or less umbilication, becomes inspissated and a yellowish or reddish crust forms, which soon drops off, leaving a sharply defined pitlike scar. The scarring sometimes is extensive and may resemble smallpox—whence also the name hydroa vacciniforme.

The treatment is on the same principles as that for erythema solare. Prophylaxis consists in avoidance of exposure to the sunrays and using protective veils and pastes. This, though, often is without avail. When the eruption is out, Crocker advises puncturing of each vesicle and applying a solution of iodoform in ether. For subsequent dressings, use a 5-percent ichthyol paste.

Prurigo Aestivale (Recurrent Summer Eruption)

Etiologically, this is allied to the preceding disease, although morphologically different. As in hydroa, the eruption appears on the face (where it is worst), the upper part of the neck, the ears, and, slightly, on the back of the hands and forearms. It consists of convex papules, pale-red, which from scratching often have a small scab on the apex. The itching often is severe. It differs from hydroa æstivale in the pruritus, in the eruption being more multiform in character, in that the vesicles, if present, are much smaller, not grouped, and that they leave no or but very slight scarring.

Attention to the digestive organs is of prime importance; regulation of the bowels by means of alkaline or acid stomachic mixtures, is required. Externally, use astringent and antipruritic lotions. Crocker advises a solution of protargol, 5 grains to the ounce, painted on two or three times a day for relieving the itching and, therefore, preventing scratching and subsequent aggravation.

Greasy applications should be avoided.

Lichen Urticatus (Urticaria of Children, Strophulus Infantum)

This starts with a discrete, small, serous exudation (wheal), often as small as a papule,

but, instead of being merely serous, which soon could be absorbed, there is actual inflammatory effusion into the papillæ, so that a permanent papule is left after the wheal has disappeared. It is an extremely itching eruption, consisting of inflammatory red papules, the size of hempseeds, surrounded by a paler, pinkish halo, and often is surmounted by a small vesicle, which is soon scratched off and then dries into a little blackish bloody crust. It is generally more abundant in an infant about the loins and buttocks and on the limbs. Irregular flat crusty pustular lesions are sometimes interspersed among the papules, and it is for this, frequently, that the child is brought. The wheals often are not present, when the patient is seen by the doctor, and the mother generally says nothing about them, unless they are inquired about. It is observed mostly among the children of the poor, in dispensaries more than in family practice, and it is extremely obstinate.

The disease has given cause to considerable controversy since the time of Bazin, Hebra, and Bateman. It is, undoubtedly, an urticaria, and, like that, is the expression of some autointoxication from ferments produced by some disturbance in the gastrointestinal tract, as we see it often appear at the time when the infants are taken off the breast or their mode of feeding is changed. But, whatever the immediate cause may be, we see it appear in preponderant numbers in summer, and for this reason it is justificable to discuss it with the summer eruptions.

The treatment of lichen urticatus is, to a great extent, identical with that of urticaria. Regulation of diet is of prime importance; in the first place, guarding against overfeeding. When the patient is seen for the first time and the bowels are not in order, it is good policy to start with a cathartic and an intestinal disinfectant (calomel in small doses); in older children, a milk and vegetable diet and avoidance of eggs and meat; in anemic children, arsenic and iron tonics. (Solut. Fowlerii, 10.0; tinct. ferr. pomat, q. s. ad 60.0. Dose, 20 drops in water after eating.) Externally: Sulphur baths. (Solut. Vlemingkx or potass. sulphuret, 2 to 4 ounces to a bath, according to age. Or, permangan. of potass., 2.0 to 8.0 Grams to a bath.) After bathing, anoint the skin with ichthyol, 5.0; sulphur precip., 5.0; zinc oxid., 10.0; vaseline, q. s. ad 100.0. At daytime, or at night, during attacks of itching, sponge with antipruritic alcoholic lotions: Carbol. acid, 3 to 5 percent, or thymol, 1-2 to 1 percent, or menthol, 1-2 to 3 percent.

Pruritus Aestivale (Summer-Itch)

In the obscure pathology of general pruritus, the seasonal pruritus is the most puzzling. We encounter, usually, general pruritus in patients suffering from toxic disease, as in albuminuria, icterus, diabetes, tuberculosis, carcinosis, sarcomatosis, or in chronic intestinal disorders, in helminthiasis, and so on. All these diseases are characterized by some (often unknown) toxic substances circulating in the blood and affecting the sensory endings of the skin-nerves. Every general pruritus, therefore, is in all probability, an expression of some sort of autointoxication, which we may, reasonably, assume to exist also in the seasonal pruritus; perhaps insufficient perspiration, causing retention in the skin of some unknown toxic substances contained in the sweat. We may think this theory supported by the fact that diaphoretics usually relieve general pruritus.

The treatment of summer-pruritus is, therefore, purely symptomatic and empirical. Internally, pilocarpine, about 1-6 grain three times a day, may be given; externally, the various antipruritic lotions.

The affection is seen but very rarely and, consequently, its existence as a pathologic entity is doubted by many.

Miliaria (Prickly Heat, Heat-Rash)

This affection, in its various forms, is due to sweat obstruction, with mildly inflammatory symptoms, congestion, and exudation, this leading to the formation of papules and vesicles. There still is quite a difference of opinion as regards the pathology, whether it be an affection of the sweat-glands or the epidermis; nevertheless, there is no doubt as to heat being the essential etiological factor. The eruption consists of minute bright-red acuminate discrete papules—miliaria papulosa—or crowded together with vesicles—miliaria vesiculosa. At first, they are surrounded by a pinkish or red areola—miliaria rubra—but, later they become pale and whitish—miliaria alba. The eruption usually comes on suddenly, preceding and accompanied by profuse sweating in other parts, and is attended with intolerable pricking and tingling. It affects large areas, chiefly in covered parts, such as the limbs, breasts, flanks, and upper part of the forehead. In fat persons, especially when exposed to friction with dirty clothing, the skin may become infected with staphylococci, and in

fat, especially anemic, children, the parts may become eczematous; but, usually the eruption dries up in a few days and disappears, under slight desquamation.

Uncomplicated, the attack usually subsides in the course of a few days or two weeks and, therefore, requires but little treatment. Rest, light clothing, simple diet, saline diuretics, are the chief measures. Locally, calamine-lotion, with a little phenol or menthol to allay the itching; or, solution of aluminum acetate, 3 tablespoonfuls to 8 ounces of water, mixed with 1-2 a fluid ounce of glycerin and 1 ounce of talcum powder.

Hydrocystoma (Sudamina of Face, Cyst of the Coil-Gland Duct)

This disease is rare, and it consists of deep-seated noninflammatory vesicles confined to the face, especially to the nose and adjacent parts of the cheeks. The vesicles never rupture spontaneously and there are no accompanying signs of inflammation. In the course of a few weeks or months, the lesions undergo desiccation, leaving no visible trace. The disorder generally appears during the summer months and may recur each season for several years. It usually attacks persons who are subject to hyperidrosis of the face. Subjective symptoms are slight or absent. The disease is due to a cystic enlargement of the coil-duct, which is filled with retained sweat.

The vesicles should be punctured and drained and then an astringent lotion applied. Prophylactically, avoidance of exposure to heat, particularly moist heat, is indicated.

Bromidrosis (Stinky Sweat)

This disorder is a qualitative disturbance of the sweat function or an alteration of the sweat after its excretion. The greater the amount of perspiration, the more intense the odor; hence, its aggravation in summer time. The trouble may be general and symptomatic of some nervous disturbance, but, as a rule, it is idiopathic and local. The parts that are most often involved are, the axillæ, the genitalia, and the feet. The disease is, in some cases, inherited; I have repeatedly treated parents and their children for bromidrosis. The foul odor sometimes is so obnoxious as to make the presence of the victims absolutely intolerable. This condition makes the necessity for relief imperative, and patients usually are willing to undergo any kind of treatment to get rid of this serious affection.

Internally, we use the same remedies as for hyperidrosis, aiming at diminution of perspiration: Atropine (Atropine, 0.02; tragacanth, 1.5; glycerin, pulv. liquiritiæ, enough. Make into 20 pills. Take one pill mornings and evenings.), agaricin (0.0005 per dose), ergotin, and arsenic. Of these drugs, the first two produce their effect by paralyzing the nerve-center, while arsenic, which is excreted with the sweat, may directly influence the secreting-capacity of the epithelium of the coil-glands. It goes without saying that these medicines have to be carefully administered and watched for symptoms of toxic action.

Local treatment is of main importance. Its effect is sought to be gained by a destructive influence upon the epidermis. All the applications, therefore, lead to a mortification and exfoliation of the upper layers, whereby it is assumed that a like action is exerted also upon the epithelium of the coil-glands, which are imbedded in the deeper layers of the skin, prohibiting and checking their supernormal activity.

For the axillæ: Plain washing with spirit of camphor or a solution of potassium permanganate, 1 : 500; or, of tannic acid, 1 : 100; or, of chloral hydrate, 1 : 100; or, of corrosive sublimate, 1 : 500. Likewise: painting on a solution of 5 percent formalin in alcohol; or, balsam of peru, 1.0; formic acid, chloral hydrate, each 5.0; alcohol, 89.0. Or, naphthol, 5.0; glycerin, 10.0; alcohol, 85.0, followed by dusting with a 10-percent tannoform or salicylic-acid powder. An ointment containing formalin, 3 to 5; lanolin, 5.0; vaseline, 10.0; may also be applied; but may have to be followed by soothing applications because the parts sometimes become irritated.

For bromidrosis and hyperidrosis of the feet: Paint the affected parts with a 10- to 40-percent solution of formalin, or, with a 10-percent solution of silver nitrite, followed by a 10-percent tannoform or salicylic-acid powder, which is simply sprayed into the stockings. If there are fissures and rhagades, they must be protected by some soothing ointment.

The best treatment, in my hands, both for hyperidrosis and bromidrosis, has been the use of the x-rays.

Dermatitis Venenata

The frequency with which ivy-poisoning is observed in summer is well known. It appears as an exudative erythema, with redness and swelling, or, in severer cases, as an erysipelatous erythema, with the addition of vesicles and bullæ on hands, face, and fre-

quently also on the genitals and in the anal region.

Innumerable remedies are recommended for rhus-poisoning, but, the fact is that the disease has a tendency to more or less quick spontaneous recovery and will do well with any protective and soothing application as used in other acute erythemas. As a routine, I have used the solution of aluminum acetate, as mentioned under miliaria, with good results.

Mosquito Bites

It is obvious that the summer months make exposure to injuries and diseases contracted from animal parasites unavoidable. Flea bites, mosquito bites, grain-itch, and so on, are common occurrences.

To relieve the itching and reduce the inflammatory symptoms, antipruritic and astringent remedies are used: diluted ammonia-water, vinegar, menthol, salicylic solutions, and the like. Prophylaxis: mosquito-netting and painting of the exposed skin with volatile oils the odor of which shall repulse the animals, such as oil of eucalyptus, menthol, camphor, naphthalin, and the like. A pleasant preparation is the following:

Naphthalin	Gm. 10
Camphor	Gm. 1
Oil of cloves	gtt. 20
Acetic acid	gtt. 20
Oil of anise	gtt. 40
Vaseline	Gm. 100

An Old Doctor's Life Story

An Autobiorgaphy

By Robert Gray, M. D., Pichucalco, Mexico

[*Continued from July issue, page 501.*]

THE knell to the hopes of the scientificos was struck when the rebels refused to rally with their party against the American invasion. Commissions were sent at once to rebel leaders everywhere, to implore their aid against the common enemy; but, not one responded, more than a few were shot, while a number of others had their ears cropped. Rebel patriotism preferred subjugation of their masters and taking chances with their conquerors to aiding them to perpetuate their usurped power, and it is almost certain that such rebels would have joined issue with the Americans against the Huerta power which very likely would have vouchsafed them a more propitious lot.

The rebel managers reckon with their host when they calculate to nip the chances of future revolutions in the bud by enfeebling the financial ability to foment revolutions, the great majority of the most hostile enemies of the new doctrine of government not being men disposed to put their bodies up as targets for bullets; yet, they are willing to pay others to assume such peril. But, if they are deprived of the means and the credit requisite to contract and fulfil such obligations, they can not make war on the powers that may rule.

The plan is deep and crushing and will, assuredly, hold in perpetual check the lust to start on the warpath. As a matter of course, it is too soon as yet to be positive of what will happen. But, the party of Huerta was composed virtually of the aristocracy and the Catholic party, which the long wars with Madero and Carranza exhausted financially and despoiled of credit. And more than this, their estates have been depleted by pillage and reduced by confiscation. The members of both parties are under the vigilant espionage of watchful eyes that were ever before indifferently harmless or awed by fear. The apathy of the peon is violently aroused to the championship of liberty, although its definition is Choctaw to him. Nevertheless, he realizes that he is free from the thraldom of labor indebtedness, free now to go and work wheresoever he pleases. Of course, he will have to hustle to earn a living. While he can demand and secure higher wages, he will have to buy his food or produce it. Under the old system, rations were furnished him and his family, and, if he lost half a week from work, as a result of a Sunday drunk, the week's ration was in the house. Now he must earn money to get his food. There will be no more of advancing money on accounts already too big ever to be paid up.

A Glimpse at the Mexican Peon System

The radical change was designed to elevate the laboring classes in morals and industry and to render them more self-reliant. There really seems to be feasible possibility in the plan. Should the homesteads of such people —should they ever become thus endowed— be made inalienable property and the owners be under the stern and pressing necessity of adapting themselves to the frugal economy of

honest industry, there will be a broad margin of practical possibility for them, that might mean vitalizing prosperity to the country. Such destiny is dependent upon early divorcement from the degrading vices that are the curse of the race. And, if they are prohibited from bartering their substance for means to indulge vice, they may gradually line up in the procession of prosperity, whether with or without this will. The government—should one become permanently established under the propaganda that the present victors pretend to be championing—will have an opportunity to achieve immortal fame in the redemption of the lower strata of Mexican life.

The Mexican political manipulators have a startling lesson from the blundering with the burning issue of the destiny of emancipated slaves, in juxtaposition with the politics pursued in the United States, that might save them from making the same disastrous mistakes in the solution of their peon problem. The negro was enfranchised in the United States in order to create a preponderating balance of power for the champions of his liberation; but, this action resulted in a ruinous reaction, that was destructive of his substantial prosperity and pitifully negative to his political ambition.

The peon problem may be rationally solved without recourse to any such unfortunate subterfuge. But, I am unable to hope that these indolent, vicious people can be transformed into a thrifty, industrious element of the population, not even on their own land, free from the labor bondage into which they sold themselves; for, as a matter of fact, there is nothing compulsory about the subjection to peonage, and there are to be found even now scattering members of the class who never incurred peon indebtedness and who labor where they please, and there may be possibly one in five hundred who owns his ranch.

Under Mexican law, the peon system can not be recognized; but, it was adopted as an industrial necessity in order to hold labor on big plantations, the peon being regarded as a free agent to contract his labor for money in advance; and there is an officer, known as jefe politico (political chief), empowered to require compliance with such obligation, the indebtedness having to be paid when such a bonded peon wishes to move to some other plantation. Most employers paid for labor in full, the men receiving wages of between $8.00 and $15.00 a month, besides rations, never subtracting anything for the standing debt, which the men ever tried to increase rather than to reduce. I know plantations where the men owe from $5.00 upward, which really is tantamount to ownership of their labor. And, then, many such laborers sell a part of their ration on Saturday night for rum, are drunk on Sunday, and then fail to work on Monday, or, many times, for the next two or three days; this, of course, counting against their next payday.

Such is the keystone to the arch of the Mexican problem. If the peons can be converted into industrious freemen who will make their labor more productive than it is now, prosperity will develop; but, if they become more indolently shiftless, the economic condition of the agricultural industry will be hopeless. There is no coordinate precedent for practical comparison, the nearest probably being the freedmen in the United States; and they have made a monumental failure of political liberty and social equality. And I see, with but little surprise, that, according to the United States census, the death rate among the negroes is three times in excess of that of the white race. The death rate here among the peon class is of even higher percentage in comparison with that of the middle and upper classes.

It is utterly against perverted human nature willingly to abandon acquired vices, and the vices of indulging in new rum and tobacco, and of eating dirt, prevalent here, seem to me to be beyond any kind of remedy, unless the impulse to become comfortably independent should tempt and actuate these miserable creatures to rise into a higher stratum of life.

The peon class of the population of Mexico will have the golden opportunity in human history to become independent on little plats of ground. The cost of a house for the family is nothing but a few days of labor, and that of clothing is a mere trifle; while the brush cut down with the ever ready machete and burned off, then holes jabbed into the ground with a sharp stick and five kernels of Indian corn dropped in, results in a crop in three months equal to any in the American bottom. Hogs and chickens are raised without an effort and sell at good prices. The peon can raise and gather his corn crop and at the same time work seven months in the year on big plantations at good prices—day labor usually commanding a dollar a day. Unfortunately, the inevitable vices and want of industry are likely to render this wondrous opportunity negative in 90 percent of these people. Nevertheless, the experiment is worth making.

[*To be continued.*]

What Others are Doing

THE TREATMENT OF KELOID

The treatment of keloid has not shown any brilliant results in the past, probably for the reason that the exact cause of this affection if not definitely determined. While some authors hold that keloid is due to an unknown specific virus, others consider it to be a tuberculous fibroma; still others claim that it is a benign fibrous neoplasm, forming in consequence of a special predisposition, the nature of which however is not understood. It may develop in connection with a tuberculous "diathesis"; it also may be induced by various affections of the skin, such as wounds, acne, tuberculous ulcers, syphilis, and others.

For these reasons, Dr. H. Gougerot, writing in the *Paris Médical* (Apr. 14), concludes that no etiological treatment is possible at the present time. Further, he has found the treatment usually recommended to be uncertain. While subcutaneous injections of fibrolysin have given good results occasionally, this is not always so. Scarification, applications of caustic remedies, injections of creosote, and even electrolysis have been tried but found wanting. Gougerot looks upon radium-therapy as the treatment of choice, and as the only one that gives a fair degree of assurance as to beneficial results. Still, even this procedure may have to be preceded by amputation of the newgrowth; a "mixed" method of treatment first proposed by himself. One or two days after the removal of the growth, a first dose of radium is applied over the dressing; this being followed, at intervals of two weeks, by two further doses. After these, three further applications may be made. The author adds that this treatment may have to be modified in accordance with the thickness of the keloid growth.

PANCREATIC EXTRACT IN DIABETES MELLITUS

The management of diabetic patients is associated with many problems that by no means are easy of solution, this being true mostly with reference to the diet. Noncarbohydrate foods—beef, chicken, butter and other oils, salad, spinach—not only are expensive, but foreign to the dietetic habits of the tenement-dweller who loves his sweet coffee and his hunch of bread and whose dietetic vagaries it is all but impossible to control. Among private patients, too, however, the temptings of candies, ices, and carbohydrate vegetables are not likely to be generally resisted, and only when these patients are in a hospital and under the care of a reliable nurse will they forego them. Finally, in cases of diabetes gravis, where fasting and starvation according to the Allen method are almost constantly necessary, in order to keep the urine sugar-free, the patient is reduced to such a state of physical weakness that he can not do his work and must become a dependent—which in the tenements means that the disease will get the upper hand.

Considerations like these have induced Dr. Wm. N. Berkeley, of New York, to investigate the chemistry of the pancreas, with a view to putting to the test clinically the belief general among students of diabetes that the secretion elaborated by the pancreas is, in most cases, the chief lack to be supplied to the patient's system.

Without entering into a critical examination of the pancreas-theory, the author relates (*Med. Rec.*, Mar. 3,) the clinical results of his use of an extract of pancreas substance prepared by himself. Out of 50 patients at the Good Samaritan Dispensary at New York who were selected for the test, a number had to be ranged out for various reasons, and the present report bears upon 13 cases, regarding which the author has exact notes as to the quality and quantity of the diet, as to the regimen, the urinary output, and the medication. In all of these, the administration of the pancreatic extract in doses of six or eight capsules a day (each containing 1-4 to 1-3 grain of the extract and 1 grain of sodium bicarbonate) caused at once a striking diminution in the 24-hours' output of sugar and, also, in all but one case, under suitable individual management, a sugar-free urine.

A few of the older patients, who, under a mixed diet of approximately 1,500 calories, voided from 30 to 40 Grams of glucose per day, required no further treatment, besides simply the administration of the pancreatic

extract. It seems that these patients presently will be able to do without this remedy and continue sugar-free for a considerable time, until some domestic disturbance, intercurrent illness or tempting feast-day once more breaks up their food equilibrium.

Unfortunately, these patients were found to be in the minority, and usually either restriction of carbohydrates, fasting or starvation (Allen method) were necessary, until the sugar disappeared from the urine; after which a slow increase in the quantity of green vegetables, butter, and protein, up to 500 calories, was feasible; this followed by enough carbohydrate or protein diet to cause the reappearance of 20 or 25 Gram of sugar in the 24-hours' urine. After this, the pancreatic extract was administered.

With the conscientious cooperation of the patient, it was found that six or eight of the capsules a day would assure the disappearance from the urine of from 20 to 40 Grams of glucose, while smaller proportions were disposed of with ease. Larger quantities of the extract probably may be found effective in removing large amounts of sugar, but have the disadvantage of costliness to counterbalance the benefit. Incidentally, the author comments upon the increased wellbeing that his patients enjoyed after this treatment.

AN UNUSUAL INSTANCE OF TRANSMISSION OF MEASLES

A child positively not exposed to measles infection contracted the disease. Prof. E. Moro (*Monatschr. f. Kinderh.*, XIV, 1) finally established the following peculiar method of transmission of the virus. Two weeks before the child in its isolated room was taken sick, another child in the prodromal stage had temporarily occupied a room directly below in the same house. The two rooms were connected by a ventilating-shaft with a screened opening in each room, both of which were heated. Any other mode of infection was absolutely excluded.

ON THE DANGERS OF IODINE-MEDICATION

As far back as 1858, Rielliet began writing on the possible untoward effects following in the wake of iodine-therapy, especially as affecting the thyroid gland. Other writers have discussed this theme since then, the most recent being Professor Oswald, of Zürich who (*Deut. Arch. f. Klin. Med.*), in addition to his critical review, present 8 specific cases in point. For example:

A man presenting himself with a moderately firm goiter, just then slightly tumesced again, was given daily 0.1 Gram of potassium iodide for fifteen days. On former occasions, for a similar reason, inunction with iodine ointment had not occasioned any marked thyreotoxic disturbances, although slightly augmenting hyperesthesia of the sympatheticus. Now, however, after ten days of the iodide-course, he had attacks of dizziness, while at the end of two weeks great nervousness, palpitation, perspiration, pulse acceleration, and weakness had supervened; and these symptoms grew worse although the remedy now was omitted. A severe hyperthyreosis developed, and it was eight months before this entirely disappeared.

A goitrous woman, for an attack of bronchitis, received, within fourteen days, a total of 0.84 Gram of iodine in the form of an iodine-tannin syrup. She became so seriously affected that it was some seven months before she regained her original weight. A man of 50, syphilitic, received 0.5 Gram of potassium iodide three times a day, and, after six weeks, severe iodism set in, which lasted nearly six months.

In the other cases, also tincture of iodine and iodoglidin were employed. All of these patients were goitrous and in all great thyreointoxication developed, which lasted many months. Hyperthyroidism was pronounced, still, the triad complex of Basedow's disease, as such, was not in evidence. There was no relationship between the size of the dosage and the intensity of the phenomena elicited.

ON THE DELETERIOUS ACTION OF IODINE IN GOITER

The phenomena described in the preceding paragraph are rationally explained by Doctor Oswald's assumption that the iodine administered stimulates the thyroid gland to increased activity; for, iodine taken may, at other times, be stored in the gland without giving rise to hyperthyroidism. It is an undue secretion of the thyroid principles that produces the latter state; as is evidenced when the gland is over stimulated by other means, Roentgen-rays, for example.

Hyperthyroidism does not always result however, whenever a goiter is being reduced; but, the 8 subjects in question already exhibited neurotic symptoms, while gout, diabetes, adiposis, and predisposition in association are not accidental in these cases. Accord-

ing to the author, the thyroid secretion is a nerve tonic, which, in excess, becomes a poison to the pathologic visceral nervous system.

However, the author concludes, the clinical picture of hyperthyroidism may not be called Basedow's disease, although the difference is merely quantitative, not qualitative. The practical deduction is, that in strumous subjects afflicted with a diseased visceral nervous system iodine must be administered with the very greatest of caution; the same being true for those who present a family history of metabolic or psychic disorders or Basedow's disease. The author recommends to give a daily dose, before breakfast of 15 mils (Cc.) of a solution of 0.2 Gram sodium iodide in 200 Grams of water, and interrupting this course for two weeks when this mixture has been all taken; continuing thus, in alternation, as long as indicated.

ENDEMIC GOITER AND DRINKING WATER

F. Messerli, of the Hygienic Institute at Lausanne (Switzerland), gave to one set of rats purest Lausanne well-water, while another set received only water from the goiter-region of Payerne, with the following result (*Zentrlbl. f. Bakt.*): All the rats receiving the Payerne water became definitely goitrous and showed increased mortality; also, enlarged spleen, diarrhea, and paralysis of the hind legs were frequent (signs of chronic infection. The Payerne drinking-water is a badly contaminated surface-water and has been shown to contain also colon-bacilli. paratyphoid-bacilli, and the proteus.

A SUCCESSFUL TREATMENT FOR PNEUMONIA

In an interesting article in *The New York Medical Journal* for April 21, Dr. Samuel Stern, of Atlantic City, gives an account of some original research carried on for the purpose of gaining an insight into the true nature of pneumonia. Discussing the normal physiology, especially in the light of the principles of the new physiology, as propounded by J. S. Haldane (*N. Y. Med. Jour.*, Oct. 21, 1916), and the pathology of pneumonia, the author refers to the fact that recovery from disease necessarily consists in restoring the normal functional activities to or near the state in existence previous to diseased alterations, and that, therefore, the cure of pneumonia depends upon restoration of normal physiological conditions of pulmonary and other tissue metabolism. The remedies employed to bring about this result, the author insists, should be as simple as possible.

The most essential element in restoring physiological processes is oxygen. Likewise, it is necessary to provide for the elimination of carbon dioxide. As soon as coagulation or consolidation interferes with physiological relations, the primary motive of any remedial agent should aim at the solution of the coagulative state.

In drawing upon normal physiological processes, we find that the combination of organic acids of food—the citrates, malates, oxalates, tartrates, and benzoates—with sodium or potassium serves to keep the various albuminous substances of the blood and body-tissues in proper balance and solution. It would be a mistake however, to supply any of these acids indiscriminately by combining them with the food, since harm might result and the author found that the selection of citric acid in combination, with sodium as the base, seemed best to answer all requirements. Citric acid should be selected, for the reason that it has seemed to be the most suitable of the organic acids; sodium in preference to potassium, because it stimulates the heart and striped tissue, while potassium is depressant and may even be toxic.

Sodium citrate is converted in the system to sodium carbonate, a most essential element in normal body metabolism. By means of this drug, we are enabled to promote resolution of the coagulated areas; with citric acid and its base, we are enabled to provide for oxidation, by supplying free oxygen in its base, sodium carbonate. We also provide for elimination of carbon dioxide and carbonic acid, which, according to Haldane's conceptions, are life's basic factors. We provide for hydration and dehydration accompanying this condition. We keep in solution the albumins essential to normal viscosity.

Doctor Stern has used sodium citrate successfully in 24 cases of pneumonia, the patients being from eighteen months to seventy-five years of age, while the pneumonia was of the various types—nephritic, tuberculous, alcoholic, postoperative, and, in one patient, frank lobar pneumonia associated with poliomyelitis. Of the sodium citrate, 2 drams is given every two hours in 8 ounces of water, the latter for its diuretic and diaphoretic effect and to aid gastric tolerance.

Some results of this treatment were as follows: Where respiration had been rapid,

labored, and limited, with accompanying pain, almost immediate amelioration was observed. Respiratory rate of from 40 to 60 was lowered to an average of 25 to 35, and usually there was greater amplitude and freedom from pain or distress. Temperature (the usual febrile state of from 102.5° to 104.5° F.) declined rapidly to 99 and 100.5 degrees within twenty-four hours. Results were obtained by lysis, not crisis, within from four to six days, without the intense prostration usually accompanying the disease. Diuresis was most pronounced. In the majority of cases diaphoresis was so marked as often to evoke comment, sometimes concern, lest the patient catch fresh cold. Any discontinuation of treatment before five to seven days is usually followed immediately by recrudescence and return to the original state.

VISUAL FIELDS IN PELLAGRA

F. Phinizy Calhoun (*Jour. Ophthal. and Oto-Laryng.*, March) concludes, from the results of his examination of about 40 pellagrins in various stages of the disease, that in most cases of this disease there is a contraction of the field of vision for form and color, with frequently an interlacing or misplacement of colors, especially the green and red; and that in a relatively large proportion of the cases there is a scotoma for red and green, and occasionally for all colors. These scotomatous areas do not necessarily occur in the typical or acute cases, for, in two patients, it was possible to detect these changes before a diagnosis of pellagra had been made.

INCREASING PREVALENCE OF CONTRACTED FEMALE PELVIS

Some interesting, albeit decidedly disquieting, statistics concerning the prevalence of contracted female pelvis have been made public by M. Hofmeier, of Wuerzburg, (*Muench. Med. Woch.*, Jan., 1916), incidental to a discussion of the subject of cesarean section. His observations tend to throw an unpleasant light upon the degenerative influences as affecting woman—hence, the race—under modern industrial and social developments. These are Hofmeier's figures:

Within the last eight years, the author performed 72 cesarean sections in a total of 7081 childbirths, or, 1 : 100, and of these only 3 were not necessitated because of contracted pelvis. In addition, he performed, during the same period, 2 pubeotomies and 76 artificial abortions, and 66 out of these for the same reason. Furthermore, he had also an unduly large number of high forceps-deliveries.

Contrasted with the foregoing figures, the author had to do 30 cesarean sections, in a total of 7533 childbirths, or, only 1 : 251, during the first fifteen years of his experience in the same city.

Such figures do not bode well for the advanced white race, especially when taken in connection with the rapidly increasing inability of mothers, even young ones, to nurse their babies, not to mention their growing voluntary and involuntary sterility as also their decrepitude and menstrual abnormalities.

HYDROCHLORIC ANIMAL CHARCOAL IN GASTROGENOUS DIARRHEA

Several decades ago, Leube recommended the use of hydrochloric acid in certain diarrheic disturbances, but, the practice virtually was abandoned as too unsatisfactory. However, this therapy entered into a new phase when, in 1908, Leo proved ("Die Salzaeure-Therapie") that gastrogenous diarrheas are easily amenable to hydrochloric acid, provided the dosage is amply large—which theretofore had been insufficient. Writing upon this subject, Otto Porges, of the military hospital at Vienna (*Ther. Monatsh.*), tells how the needful large doses of between 1 and 5 Grams of official hydrochloric acid cause too great irritation of the pharynx and esophagus to admit of wide application, while the suggested substitution of betain-hydrochloride-pepsin failed to yield enough of the acid in admissible dosage.

Then, a few years ago, came the almost epochal announcements of Wiechowsky, Adler, and others on the remarkable therapeutic virtues of animal charcoal in the treatment of intestinal diseases (cholera, typhus, etc.), and this gave Porges the idea to try this as a vehicle for hydrochloric acid, and thus at the same time get the combined digestive-antiseptic and toxin-adsorptive effects of the two. And, already in 1914, experiments fully demonstrated that animal charcoal is capable of binding a large percentage of hydrochloric-acid gas, while, on the other hand, readily giving it up again to albuminoids.

The war in progress supplied cases of anacidity and gastrogenous diarrhea in abundance, mostly based upon dietetic errors, and the result obtained with this acidified animal charcoal instantly were brilliant. (Eventually a Budapest firm produced for

the author a standard preparation under the name of "carboacid"—accent on the last.)

The perfected combination contains about 10 percent of hydrochloric acid in condensation, and the patient takes of this powder a heaping teaspoonful, stirred into half a glassful of water, after each meal. The patient takes this without objection.

We will not enter upon an analysis of the clinical reports, suffice to state that most of the patients were convalescing from dysentery, that they suffered from diarrhea, some also had colitis, and in nearly all gastric anacidity was marked. Of course, the diet was controlled. Only a few refractory cases were encountered. Because of his observations, the author inclines to the idea that existing anacidity possibly may constitute the basis of the dysentery infection itself. Convalescents from the disease troubled with obstinate diarrhea should be tested for anacidity.

THE NAVY REPORT ON CHLORAZENE

In the *United States Naval Medical Bulletin* for July, published by the bureau of medicine and surgery of the Navy Department, there appears an editorial entitled "New Preparations Issued by the Medical-Supply Depot." In this editorial, we find the following interesting statement with regard to hypochlorite-solution and chlorazene, which we quote below:

"Past Assistant Surgeon W. A. Angwin, United States Navy, has recently reported a very significant series of analyses of samples of chlorinated lime from which it was proposed to make up the Dakin fluid. Some of the samples were from ships' stores, others from retail drugstores, others from hospitals. Owing to age or other causes of deterioration, only 1 of 11 samples contained enough chlorine to yield a satisfactory preparation. It may be added that Doctor Carrel himself, writing in *The Journal of the American Medical Association*, required nearly half a page of fine print to describe in succinct scientific style the steps in the preparation.

"On board ship, we have had good results from the famous fluid, but, again, when efficient therapy was particularly indicated, it gave negative results. Where it fell short of our expectations, it was clear that through unavoidable errors in calculations and manipulations we had not succeeded in obtaining the specified solution.

"It is in view of what has been said that the bureau has decided to issue to the service a preparation known in America by the trade-name of chlorazene. This is a white, crystalline powder with faintly chlorous odor and a characteristic bitter taste, soluble in 1 to 8 parts of water. It has no direct corrosive action on the tissues, does not precipitate or coagulate protein, and is practically nontoxic, even when injected hypodermatically. Its reputed phenol-coefficient is 54. It is used surgically in solutions of 1- and 2-percent, unless the infection is one of great virulence. When stronger solutions are required, the skin edges should be protected by smears of vaseline. Oily preparations are not stable, but, a very elegant jelly has been obtained by combining it with sodium stearate. Chlorazene-gauze made with a 2-percent solution is highly spoken of. Chlorazene attacks iron, copper, and brass readily, but, has a scarcely appreciable action on silver, nickel, and aluminum. Chemically, the substance is a paratoluene-sodium-sulphochloramide. The employment of this substance is due to the associated researches of Dr. H. D. Dakin and Prof. J. B. Cohen."

In this same editorial, the writer also discusses the paraffin treatment for burns, outlining the history of this method of treatment, the technic employed, and describing the characteristics of the most important preparations on the market. This editorial concludes with the following sentence: "It is the preparation, known under the trade-name of 'parresine,' that will be issued on requisition from the naval medical-supply depots."

WOUND TREATMENT WITH CHLORAZENE-CREAM

Several highly interesting papers dealing with various phases of the treatment of infected wounds are contributed by Vincent, Daufresne, Carrel, and Hartmann to the July 1 number of *The Journal of Experimental Medicine*. In these articles, much attention is devoted to the use of a chloramine-paste, this being the same as the chlorazene surgical cream, so called, now on the market. Carrel, as the result of experiments, which he describes with much detail, declares that a wound covered with smooth granulations, devoid of necrotic tissue, with a slight quantity of secretion, and a varied but sparse bacterial flora may be completely sterilized with this paste. He says that he treated a large number of wounds in this manner, and always had identical results.

Surface wounds, deepseated wounds, and osseous cavities, which had been completely

or almost completely sterilized, could be maintained for days and even weeks in a condition of surgical asepsis by means of a paste containing from 0.7 to 1 percent of chlorazene. Slightly infected wounds were rendered sterile by means of this paste alone; but, if large amounts of pus were formed, it was necessary to remove this and disinfect the wound by the use of the hypochlorite or other antiseptic solution prior to applying the paste.

Results of the same character were reported by Daufresne, who explained why the substance known as chloramine-T, or chlorazene, was selected for use in this paste; pointing out that it possesses high bactericidal power but no caustic action on the skin, is stable at a high temperature, and can be exactly estimated as to strength. The paste, containing 1 percent of this substance, causes neither irritation nor pain. "At this concentration," Daufresne says, "the bactericidal action is strong enough to disinfect surface wounds completely, as rapidly as Dakin's solution."

Carrel advises the following procedure in applying chlorazene-paste, or cream. If the wound contains much secretion or considerable necrotic tissue, it first is sterilized in the usual manner with the intermittent wet dressing. Then neutral sodium oleate is poured on the wound and the surrounding skin, after which the granulations, epithelial edges, and skin are gently swabbed with a piece of absorbent cotton, thereby cleansing the part in a very effective way, without causing pain. Following this, a sufficient quantity of chloramine-paste (chlorazene-cream) is applied to the surface of the wound to the thickness of at least 1 Cm. (2/5 inch). It not only should cover the granulations, but also the epithelial edges and part of the surrounding skin. If the wound is deep, a sufficient quantity of the chlorazene-cream is introduced deeply into it. A compress of dry gauze, much larger than the wound, is next applied over the paste. The compress is applied to the surface of the skin and attached to it by means of two or three strips of adhesive plaster. Carrel explains that it is important that the gauze be placed exactly over the wound, for, if the bandage is shifted, the gauze will convey bacteria from the surrounding skin into the granulating wound, thus reinfecting it. Above the gauze, is placed a piece of absorbent cotton, enveloped in gauze. The dressing must not be compressed by bandages and should be renewed every twenty-four hours. The wound is washed out with the sodium oleate every day or two, depending upon the condition of the skin.

A SIMPLE ANAPHRODISIAC

The two anaphrodisiacs in most common use, says Wm. J. Robinson in *The Medical Record* for January 27 (p. 153), are potassium bromide and potassium nitrate. The latter has been used quite extensively in boys' preparatory schools. Both these remedies, however, are objectionable, first, because they are prone to produce depression and sometimes an obstinate acne, and, secondly, both are likely to fail utterly.

Now, however, Doctor Robinson declares that a simple remedy, one that acts beautifully and is free from the objections of the other two remedies, is our old friend magnesium sulphate, or epsom salt. From 20 to 40 Grams (300 to 600 grains) of this saline may be given, in half a glass of water, once or twice a day, either in the morning or every morning and night. This is said to be an exceedingly efficient remedy, and, while too drastic purgation may cause some physical weakness, the mental faculties are not impaired by it. The use of epsom salt is a palliative measure and not a routine treatment; but, as a palliative, its aid is said to be invaluable.

TWILIGHT SLEEP AND REPOPULATION

An advantage of twilight sleep that today is often overlooked is pointed out by W. O. Greenwood in *The British Medical Journal* for March 17, page 355. In this paper, he declares that the scopolamine-morphine method of inducing eutocia is of special interest, at the present time, from a national point of view. In a series of cases, which he reports, he had certain knowledge of couples who resolutely refused to entertain the idea of a child before this method was introduced; but, hearing of the scopolamine-morphine treatment, they decided that the time was ripe for them to embark upon the responsibilities of parentage. The result was, an increase of 6 percent in the birth rate in his series.

OUABAINE IN DISEASES OF THE HEART

Vaquez and Lutembacher have employed ouabaine, the glucoside of strophanthus gratus, with success in maladies of the heart, its action always being the same. (*Paris Médical.*) They administered it intravenously, in progressive doses, beginning with 1-4 milligram.

Miscellaneous Articles

More About Alcohol

AS soon as I receive my monthly copy of CLINICAL MEDICINE, I start right in and read it from cover to cover; try to digest all of it, and assimilate as much of it as I can convert to my use. I have just reached page 225 of the March number, and there I find a letter from Dr. W. S. Cline, in which he criticizes my article in the December number of the journal. I observe that he finds it "amusing" and that he attempts to bolster up a weak argument in favor of the use of alcohol by a reference to an incident related in the second chapter of John.

I can truthfully say, with Thomas Jefferson, that "I am a Christian in the only sense Christ wished anyone to be—sincerely attached to His doctrines in preference to all others," and believing in Him, as I do, I can not believe that He would sanction a belief that there was any alcohol in the beverage that was served to the guests on that occasion as wine. He expressly told the servants to fill the six water-pots with water, and they filled them *to the brim*. Then He said to them, "Draw out now," and they drew out, not alcohol (C_2H_5OH), but plain H_2O, and bore it "to the ruler of the feast," who being a man of sense and judgment—immediately realized that he had received a very delicately expressed rebuke, and, being also a man of resource, he called the bridegroom and made it plain to him. And that ended the first great lesson by the "Man of Nazareth."

If Doctor Cline had stopped right there, I should have dismissed his criticism with the language of good old Ben Butler's historical retort, "Shoo, fly, don't bother me." But, he goes on and says: "After a practice of fifty years, I must say that many a patient will die in the crisis of pneumonia solely for the want of alcohol. I just had an experience of that kind, where other stimulants were being used. The patient vomited after each dose; but, behold, one-third-glass of whiskey was retained and the effect was *instantaneous*." The italics are mine. Wonderful, was it not? I should like to know just what happened. Was it instant death? Was it instantaneous recovery? Think it over.

Doctor Cline ends his letter by saying, "There has been nothing yet invented to take the place of alcohol at the bedside," and, when he makes such a statement as that, "my hat is in the ring." It all depends upon what doctor it is who sits at the bedside. Future generations of physicians may find something, just as thousands of physicians of the present generation have already found something, scientific, reliable, and satisfactory.

If Doctor Cline had treated his pneumonia-cases, from the beginning, by the method outlined by Dr. W. C. Wolverton in the January number of CLINICAL MEDICINE and as advocated by Dr. W. C. Abbott for the past twenty-five years or more and as practiced by several thousands of physicians all over the country, myself among the number, he would not have been confronted with such a crisis as he describes, and would realize that something has already been found to take the place of his favorite poison.

It takes something more than a diploma to make a doctor. When a man starts out into the world with a "sheepskin" and a license to practice medicine, he faces great responsibilities and carries with him the power to do a great deal of good and the ability to do a great deal of harm, according to his natural and acquired qualifications and judgment.

In order to do the greatest amount of good, with a minimum amount of harm, he must, of necessity, have some natural mechanical ingenuity; be something of a chemist; know something about electricity and animal magnetism; know something about pumping-stations, sewers, and ventilation-systems; have enough phosphorus in his brain, enough iron in his blood, and enough lime in his backbone to realize and admit that back of all creation there is a God, and be mindful of the Hippocratic rule, "Do no harm." For, in his practice, he will find that he not only

has to deal with disease, but that he has to deal with the most wonderful, the most complex, and the most highly organized machine in existence—as I have remarked before—for, the human machine is made up of millions of cells, each of which is a chemical laboratory, and each molecule an electric dynamo.

Within this wonderful machine, there is a complete, rapid-transit, parcel-post carrying system. The heart is the central station, the arteries are the main lines, the capillaries are the branch lines, and the veins are the return lines. Accompanying this rapid-transit system, is a complete telegraph system. The brain is the central office; the spinal cord, the main trunk line; the nerves, the branch lines; each one an individual line, with a return line, wrapped up in the same cable.

We also have a complete telephone system, consisting of a number of "exchanges," or ganglia, and wires connecting all "departments."

We have a filtration system, several sewer systems, a ventilation system, and a supply station, into which we dump all kinds of supplies—both good and bad—three times a day or oftener, if our meal-ticket holds out, and, as the word *auto* (from the Greek word *autos*), means self and the word *mobile* (from the Latin word *mobilis*) means movable, and this human machine of ours is a self-starting, self-moving, and self-supporting machine, it follows that man is an auto-mobile; and, "as we contemplate its exquisite perfection of contrivance, its endless examples of means adapted to ends, its prospective expedients against future needs, its compensations for inevitable disadvantages," its wonderful powers of reproduction, and its marvelous symmetry, we realize the tremendous power and intelligence of Almighty God, its inventor and creator.

Now, when God made this wonderful machine, He had nothing but air, earth, and water for His materials. So, He took an even dozen of the elements as they then existed and made the man machine. And He not only made him out of the ground, but he made him from the ground up, and finished him off at the top, by placing in the top and front of his head what we call the phrenetal brain; and, as He wanted to separate, and differentiate forever this machine from the "Fords" (i. e., the lower animals) that He had already made, He made this part of the machine the seat of the soul, the home of the spirit, and the organ of the *mind*—that wonderful thing with which a man, not only builds a high-level bridge or a skyscraper, down to the last detail and the smallest rivet, before a single foundation-stone is laid, but with which he also begins a moral struggle, achieves a moral victory, and builds a moral character. And, finally, He made this phrenetal brain a sending and receiving wireless station. If we keep it in tune with Almighty God, we stand as His masterpiece, our feet on the earth from which we came, our souls in touch with our Heavenly Father; for, when He made this wonderful machine, He said: "Henceforth you are your own chauffeur and must be responsible for the upkeep of this machine. I have filled the great storehouse of nature with the fruits of the earth, fresh air, and water. With these things, you must run your machine. Go to it, but do not exceed the speed limit." Then He turned him loose.

Soon afterward, the Devil invented alcohol, and from that day to this, all over the world, men have been trying to run this intricate and beautiful machine with alcohol. But, you can not do it, any more than you can run an electric machine by filling its storage-batteries with gasoline. WHY? Because alcohol is a poisonous hydrocarbon, and not a food, and, when taken into the stomach is absorbed, undigested, and passes unchanged into the life-stream as alcohol, where by its anesthetic, toxic effect it causes drunkenness, poisons the blood, inflames the stomach, congests the liver and kidneys, coagulates the albumin of his nerves and brain, and, when used habitually, makes a drunkard of a man, and he becomes, literally, dead at the top, physically, mentally, morally, and spiritually.

When this point is reached—and it is sooner or later by everyone who uses alcohol as a beverage habitually—man is out of tune with God (good) and in tune with the devil (evil), both by wire and by wireless. So true is this statement that today drunkenness and debauchery stain the family-altars of millions of homes all over the land; vice and corruption permeate our entire social fabric; justice is asleep; sin stalks abroad in the daytime; crime runs amuck, and the Devil laughs at us from every street-corner, while back of it all stands the nation's curse, alcohol. Let us be honest and ask ourselves the question, How much, as physicians, are we responsible for this condition of things?

It is not alone the immediate effects of alcohol that we are concerned with. We are also concerned with the remote, the after-effects upon the human machine and the entire human race. We are rapidly becoming a

race of defectives. If you doubt it, watch the recruiting-stations and note that on an average nearly four out of every five applicants for enlistment are rejected as defective.

The greatest danger that menaces this nation at the present day is not from invasion by a foreign foe nor from internecine strife, but it exists in the fact that, out of the millions of potential fathers and mothers who are to become the progenitors of the coming generations, every man and woman of them who drinks alcoholic liquors habitually is absolutely unfit to become an ancestor, for the reason that, in transmitting the life-principle to their offspring, they also transmit to them, through a degenerate cell structure, a predisposition to tuberculosis, rheumatism, kidney disease, nervous diseases of many kinds, imbecility, idiocy, insanity, and other defects that are beyond computation.

The greatest calamity that can possibly befall a nation is, physical, mental, and moral degeneracy. The greatest, and most valuable asset any nation can possibly have is, a perennial crop of normal, typical, healthy babies. WHY? Because the babies of yesterday are the young men and women of today. The babies of today are the young men and women of tomorrow; and thirty, forty, and fifty years from today the strength and the weakness of this nation will depend absolutely on what the babies of today and of tomorrow amount to when they grow up. If the babies of today and tomorrow are normal, typical, healthy babies, the nation fifty years from today will be the leading, dominant nation of the world; but, if the babies of yesterday, today, and tomorrow are abnormal, atypical, unhealthy, and defective, the nation fifty years from today will be a nation of degenerates, and as such it will disintegrate and die.

The river of life is an endless stream that flows on and on and *on* between the shores of two eternities; and, regardless of any preconceived ideas on the subject, it is an established fact that life, in the present day and in the human family, is transmitted from parent to child. It has been so transmitted ever since Adam and Eve wandered together in the shady forest aisles of old Eden; it will be so transmitted until the last man and the last woman have been transmuted from the clay on this side the river into the finer metal on the farther shore of eternity.

Therefore, I am voicing a great truth when I say that the fountain of life is the parent; the little streams of life that flow therefrom down the hillsides of time are the babies; and the idealized type of a perfect baby is the infant Jesus, in the manger of Bethlehem. And, what a wonderful baby He was; with His beautiful head, expressive eyes, symmetrical form, and shapely limbs. He was the kind of baby that every woman in the world wants her baby to be; the kind of baby that every baby born into the world ought to be, the kind of baby that every baby born into the world would be if sin and disobedience to God's laws had never entered into it, to transform a race of perfect men and women into the race of human weaklings that we see in the present day.

I say to you that, when we stand in the presence of a newly born, normal, typical, healthy baby, we stand in the presence of the highest type of God's creative genius. For, the wonderful science of biology teaches us that, unless the stream of life is poisoned at the fountain, before its birth, every baby born of woman is a perfect type of God's creation, as there is nothing more exact than the certainty with which nature, unmolested, reproduces its types. So, when a baby is born into the world in an abnormal, atypical, defective condition, something and somebody are to blame for it; and, in 85 out of every 100 such cases, that something is alcohol, and that somebody is the man or woman who drank alcohol until the cells from which that baby was developed became defective, and by which it is forever handicapped in the fight for existence and the pursuit of happiness.

The more this subject is investigated—and it is being investigated by some very brilliant and honest workers—the more significantly the facts point to alcohol as the greatest curse of the human race. Doctor Cline says that nothing has been invented to take the place of alcohol at the bedside; but, I say that alcohol has no legitimate place at the bedside as an internal medicament.

When you pronounce the word alcohol, you name the cause of more sin, shame, misery, destitution, pauperism, prostitution, crime, idiocy, imbecility, insanity, and degeneracy than all other causes in the world put together. It opens the doors of almshouses, assignation-houses, bagnios, hospitals, jails, prison-pens, and penitentiaries. Its history is written in tears and blood and in great splashes of shame and dishonor. It is a shame to the city, a crime against civilization, a disgrace to the nation.

The physician who prescribes or dispenses alcohol is dealing with something more

deadly than the serpent that invaded the Garden of Eden. The far-reaching results of alcohol drinking upon generations yet unborn can never be computed. The physician who prescribes alcohol is taking upon himself an unnecessary and very serious responsibility.

Alcohol is the greatest liar on the face of the earth; it promises you heaven, and it gives you hell. The harm it does so far outweighs any possible good it may do that no physician is justified in prescribing it. Fortunately we have true remedies that accomplish definitely what alcohol pretends to do. When a physician has had his attention called to the prompt and satisfactory results obtained in the treatment of pneumonia with the alkaloidal remedies, backed up under certain circumstances by other equally scientific adjuncts, he, often, is either too old to learn or too bullheaded to want to learn. If seen at the outset, most cases of pneumonia can be promptly aborted. As soon as crepitus disappears and bronchial breathing supervenes, give the following mixture: Rub together in a mortar 2 drams of carbonate of ammonium, 2 drams of true salicylic acid, with a little water, until effervescence ceases, then add enough syrup of wild-cherry to make 4 fluid ounces. Of this mixture, give to an adult a teaspoonful every three hours, to children in proportion. Then note the rapidity with which the patient rallies and recovers.

The change will not be "instantaneous," but, it will leave no possible place for alcohol at that bedside, while, with the eminently scientific, reliable, and satisfactory methods of Doctor Wolverton, a physician is armed with all the ammunition he needs for the successful treatment of the worst form of pneumonia.

I practiced medicine in Dakota from the spring of 1882 to the fall of 1890 and during a portion of that time was superintendent of the territorial board of health, and that brought me in contact with physicians all over the territory. We had hundreds of cases of pneumonia, some of them complicating the terrible "Red River fever." It was then that I began using the alkaloids, and I received many a pointer from the old ALKALOIDAL CLINIC. If called to a case of pneumonia in time, we often had the satisfaction of aborting it, but oftener had to "see it through."

Keeping in mind the Abbott slogan, "Clean out, clean up, and keep clean," we cleaned out the sewers and kept them clean; looked after the telephone and telegraph systems; paid strict attention to the supply station; watched the pumping-station of our rapid-transit system; very carefully conserved the energy of all parts of the machine, and gave strict and specific attention to the ventilation system, because there was something obstructing the screens.

There is where the alkaloids and the mixture of ammonia and salicylic acid exert a specific effect. No, salicylate of ammonium will *not* have the same effect. The mixture must be made fresh for each case and be administered regularly and faithfully. No room for alcohol there. And, how any physician can be a reader of CLINICAL MEDICINE and still pin his faith to the oldtime methods of treatment of pneumonia and typhoid fever is beyond my comprehension.

I am not a fanatic who can see but one side of a question. I am able to see both horns of a dilemma, if there are two horns. I have no quarrel with the thousands of physicians who use Merrill's normal tinctures, Lloyd's specific tinctures, or with the Homeopaths who use mother tinctures; for, I realize that incontrovertible fact, that the word "poison" is a relative term and that alcoholic tinctures dispensed in the proportion of from 7 to 15 drops in twenty-four teaspoonfuls of water are not poisonous; but, I deplore the use of the U. S. P. tinctures and fluid extracts which contain from 25 to 90 percent of alcohol and are dispensed in teaspoonful doses, as is often the case.

I have made a study of the effects of alcohol upon the human machine for forty-four years, and during that time I have, much to my present regret, conducted some experiments on my own machine. I admit that I have consumed in past years my full share of the world's output of alcoholic poison; but, for many years, I have been "on the waterwagon."

I have obtained from the people themselves the life-histories of more than 1200 male drunkards and of 269 female drunkards. Of these, 312 male and 68 female drunkards attribute their downfall to the use of alcohol that was prescribed for them during convalescence from pneumonia, typhoid fever or some other illness. They do not blame the doctor, because in nearly every case I was assured, "The doctor says it saved my life." One physician had a favorite formula for a "tonic," made by mixing tincture of cinchona compound, tincture of gentian compound, syr. zingiber, syr. aurantii cort., of each 2 ounces, and spts. vini gallici, 8 ounces. Dose,

one tablespoonful three times a day. To my positive knowledge, that prescription made 42 drunkards, 3 of them in one family. How many more drunkards that doctor sent to the great human scrapheap I do not know; but, that experience alone should forever stamp the use of alcohol as a tonic with the condemnation of every physician in the world. The commandment, "Thou shalt not kill," applies to the physician as well as the layman, and the sooner alcohol is discarded from the armamentarium of the physician, the better for the people among whom he lives.

I have just cured a young woman of morphine-addiction, who was made a victim of this awful habit by a physician who prescribed it for her for menstrual pains. Just a week after she received her last dose of morphine, she began menstruating and had the usual agonizing pains. I gave her 1-100 grain of glonoin under the tongue; followed it in fifteen minutes with a granule of hyoscyamine, 1-1000 grain, and one of anemonin, 1-128 grain. In fifteen minutes, I repeated this dose, and in an hour gave one more dose, when the young woman "rose up and walked," and pronounced it a miracle.

Any physician can obtain just such results in pneumonia by the use of the alkaloids and the ammonia and salicylic acid mixture; and, even if he is a Missourian, he will try it, unless he is a bonehead.

I don't care a rap what school of medicine a man comes from or what he uses to get results, so long as he gets results and does no harm, and the time is ripe for all medical men to unite in a finish fight on alcohol, the greatest curse of civilization.

Let us ask ourselves a few questions. What becomes of the human derelicts who are stranded on the rocks of alcoholism every year? What becomes of the wrecks who go to the human scrapheap every year, through the mistakes of physicians? Roll back the stone from the tomb and bid them come forth and answer our question. They do not come; they can not come. Who is responsible?

GEORGE D. SWAINE.

Cleveland, O.

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[Although we like a good fight, ourselves, we do not believe that polemics work to the best interests of the journal in which they are published, nor of the participants. Usually, polemics serve no good purpose and do not settle the questions at issue. For this reason, we trust that this rejoinder by Doctor Swaine to the criticism of his earlier communication will close this discussion.—ED.]

AN ARRAIGNMENT OF WHISKY

A whisky-wreck thus rails at John Barleycorn:

"Oh! cursed drink, I know thee to be of satan, for, I, myself, have eaten at thy scanty table and slept in thy cold bed. Never yet have I seen thee bring one smile to human lip nor dry one tear as it fell from human eyes. But, I have seen thee sharpen the tongue for biting speech and harden the tender heart. I have seen thee make even the presence of love a burden and cause the mother to wish that the babe nursing at her scant breast had never been born.

"Oh! drink, thrice be thou accursed. I know thee to be twofold the child of hell. I have seen thy wrecks on all the shores of life. I have seen thee despoil a thousand happy homes and laugh in fiendish glee over thy victory. I have seen thee rob and debauch men, yea, and women, and turn them over to the county home and potter's-field. I have seen thy hand of blight touch the fairest human flowers and turn them black.

"John Barleycorn, thou old destroyer of homes and happiness, thy death would intoxicate my soul with joy and inspire my muse to inscribe upon thy gravestone words fit for thy.

EPITAPH

In resurrection's final morn, when Gabriel sounds the trump of doom,
The last to leave his dismal tomb will be John Barleycorn—be delayed
That all his sins may be displayed to heaven's immortal host arrayed,
And saints will shout as down he dives. Hell will be full when he arrives."

G. N. MURPHY.

FIBROLYSIN DISSOLVES SCAR-TISSUE

The specialist may intend being absolutely fair with his brothers in general practice and try to avoid all work outside of his special line, yet, there are instances wherein patients evince resentment if he refuses to prescribe for them or shows a lack of interest in their relation of other ailments from which they may suffer.

Again, if the specialist be a real physician, he feels the need of keeping in touch with general practice and, often, fairly longs to test some new and promising remedy or to try out a self-devised method of treating some certain condition.

In this, I wish to report on my use of fibrolysin (scarcely known in this section) in

three cases; in two of which, my use of it would, by some, be considered very unethical. Nevertheless, I confess to my straying from the straight and narrow.

Case 1. Three years ago, a young woman, in an advanced stage of tuberculosis, was sent to me for treatment. She had a stricture of the rectum, following treatment of ulcerations, the attendant having employed caustic acids. The lesion included almost the entire circumference of the gut and the woman suffered much pain and lost considerable blood at each effort at defecation. I could not pass the index-finger through the stricture and feared hemorrhage and perhaps rupture of the walls should I attempt instrumental dilatation or use any effective degree of force in any measure undertaken.

Some time before this, reports on the absorptive powers of fibrolysin had engaged my attention, so, remembering this now, I concluded to give this preparation a fair trial. Consequently, each day I cleansed the surface of the gut and with a trocar placed 10 drops of the fluid in the scar-area. Also, after each defecation and on retiring at night, the patient had to insert a suppository incorporating the same amount of fibrolysin. At the end of the first week, she experienced less pain and after two weeks I could pass the finger through the ring—which latter was noticeably softening. The daily use of the suppositories and two office-treatments each week were continued for ten weeks, at the end of which time there was but little pain during defecation and no bleeding. She then quit, and died of tuberculosis, within a year after. However, no further complication in the rectum had occurred in the meantime.

Case 2. A man of 42, who had had special treatment, had been in a railroad accident five years before and had to have his right leg amputated at the upper third. He had undergone two subsequent operations on the stump and months of various treatment, to overcome the extreme pain that made impossible the use of an artificial leg for more than a few days at a time. He told me he had worn three different makes of limbs and was contemplating getting a fourth. He said that all the pain was just beneath the scar. I looked at the stump. The scar, which extended the full distance across the middle of the stump, was almost as hard as bone.

I decided to try this absorptive remedy. I made the injections along the edges of the scar, using half an ampuleful about every three days. The administration of the contents of five full ampules completely obviated the hardness of the scar-tissue, and with the result that he was able to bear the artificial limb and now has been using it, alternatingly, for five months, without any discomfort.

Case 3. A young man of 19, while having a thrombotic hemorrhoid treated, asked me what I could do for him to relieve a strictured foreskin. He had had a long prepuce and so tight that the glans could not be uncovered without extra effort. A circumcision had been done three months before, but left him in a worse condition, for, now the foreskin was so tight that only the tip of the glans was exposed during erection. I found that the penis was of more than average size, but the glans undeveloped and shaped like an almond. As he wouldn't consent to surgical measures, I suggested a trial with fibrolysin, but made no promise.

Once every day, I massaged the ring of scar-tissue by inserting the tip of a finger within the foreskin and, after grasping it with the ball of the thumb and placing a few drops of the fibrolysin between them, manipulated the tissue, with a rolling movement, for about five minutes. A noticeable softening and stretching of the ring was evident at the fifth treatment. Circumstances then limited treatments to two or three each week. When the fourteenth treatment was given, the entire glans could be uncovered during a firm erection, without giving pain, and it was assuming a normal shape. A perfect result has been obtained. Only four ampulefuls of the fluid were consumed in the entire treatment.

Case 4. A high school student of 17, son of a brother physician, while handling a large ball in a game at bowling, caught the hand between the ball and floor, fracturing the metacarpal near the phalangeal joint with the middle finger, as well as splitting it from the distal end to the point of fracture. Free joint movement following the repair of such injuries is well understood to be almost a miracle.

Nature threw a prodigious amount of repair material about the site of this injury, causing the formation of a callus that held both flexor and extensor tendons immovable. The palmar surface was bulged as though a part of a good sized marble had been inserted beneath the skin. No evidence of absorption could be detected.

Realizing that irremediable ankylosis would soon result, we began the use of one-half ampule fibrolysin, every 48 hours, in-

jecting into the palmar and dorsal surfaces, alternately. Yesterday, March 20, before making the eighth injection, the distal end of the phalanx could be made to move over about one sixth of its circle of curvature.

I trust that no reader of this report will suspect me of trying to boost for any pharmaceutical firm. I could have sent this to the House of Merck, with consent of publication, and it would, no doubt, have been appreciated. But, I do not believe that many physicians read the reports sent out by various firms; therefore, I submit it to the readers of CLINICAL MEDICINE, hoping that, should any have occasion or find indication for such a remedy, they may obtain equally pleasing results from its use. Perhaps I should add an important warning against employing fibrolysin for any one having a laparotomy scar, for, hernia could follow its use under such conditions, owing to the softening of the abdominal scar.

W. F. SCHRADER.

Fort Wayne, Ind.

[Warnings have also been voiced against the use of fibrolysin in persons having cicatrized tuberculous lesions; for fear that these might be softened, and any persisting tubercle bacilli set free.—ED.]

THE IGNORANT MIDWIFE

This is a plea for the protection of the helpless mother and her unborn babe. The ignorant midwife is such a serious menace to the welfare of the human family that I feel justified in calling the attention of the members of the medical profession to this great evil, and feel safe in asserting that the subject is of grave importance and worthy of the careful consideration of physicians everywhere.

We should unite in an effort to discover a remedy for this evil, and, when one is found, it should be strenuously applied. Statistics teach us that one out of every seven babies born in this country dies before it is one year of age; in other words, out of every one hundred babies born, nearly fifteen die within a year.

I am glad to note that a movement has been started to save the seventh baby. Is it not our duty to do all we can to aid this good work? While I do not wish to be understood as blaming the ignorant midwife for all this fearful mortality, I do say that she is responsible for very much of it. Statistics also teach us that 40 percent of the babies are born without the care and attention of a physician, and in what is known as the "black belt" of the South, where the negroes are greatly in the majority, I feel sure that the percentage is double this number. I venture the assertion that there is not a physician practicing in the South, and especially in the delta section of Mississippi, but will testify that the ignorant midwife is the most serious menace to the mother and her unborn babe, yet, what is being done by any state or national government to correct this evil? Nearly every state has laws regulating the practice of medicine, but is there one regulating the practice of midwifery? Yet, medical writers tell us childbirth is the most difficult period of woman's life.

We boast of our great country and its wonderful progress, but do we consider the fact that this great country of which we boast (judging by the laws enacted) is much more interested in protecting the dumb brutes within it than the helpless mother and her unborn babe? Many counties in this state of Mississippi pay a veterinarian to treat cattle, horses, and mules and, so, prevent disease and death among them, thereby saving loss to the owners. The federal government, as well as many states, are spending large sums of money in the effort to eradicate hog-cholera and save the hogs, but, what is being done by state or national governments to protect the mothers and babies against the ignorant midwife? Why is it that there is, apparently, more interest shown in protecting the dumb brute than the human being? Those physicians who practice medicine in the Mississippi delta know that, as a class, the "negro granny" is among the most ignorant and often the most filthy in the community. Often, too, these women are the most superstitious, yet, they are permitted to practice without let or hindrance.

Who can tell the number of women who are invalids today because of the gross ignorance of these socalled midwives? A writer says that 75 percent of the blind were born blind or became blind soon after birth. While I do not believe the percentage is as high as given by that writer, we all know it is very high and absolutely unnecessary in nearly every case. Who can number the babies whose sight has been destroyed and who are condemned to go through life blind and helpless, mostly because of the ignorance and filth of these untaught midwives?

What, I repeat, is being done to remedy this great evil? The fact that our country

is just embarking in the world-war, the duration, nor the result of which, no man can foretell, is all the more reason why each of us should "do our bit" to do away with this evil. Therefore, let us get busy and endeavor to have laws enacted, in every state, regulating the practice of midwifery, just as the practice of medicine is being regulated.

H. C. BUCK.

Friars Point, Miss.

CLINICAL MEDICINE FOR MARCH, 1913 WANTED

We are anxious to find the issue of CLINICAL MEDICINE for March, 1913, which contains several articles referring to our late colleague, Doctor Epstein.

Mrs. Epstein informs us that the number in her possession has been lost, probably having been loaned out and not returned; and she is, naturally, anxious to receive another copy. If any reader of CLINICAL MEDICINE has a copy of this issue to spare and will send it to us he will confer a favor on Mrs. Epstein. Kindly address, The Librarian, 4757 Ravenswood Ave., Chicago.

FOOD ECONOMICS—II THE CHEMISTRY OF COOKING

There is a woful lot of ignorance among the laity in respect to the nutritive value of foods in general. Nor has the average doctor devoted sufficient study to this subject to enable him to teach his patrons. As to the chemistry of cooking, he is poorly informed, this subject not being taught in medical colleges. Medicine will, in the future, have to concern itself with a rational system both of feeding and the proper preparation of food.

In my 54 years of medical experience, I have found that in a large percentage of cases that I have had to treat I could point either to malnutrition or insufficient nourishment as the prime cause of disease.

Food is required by the body for two chief purposes, namely, to generate heat and to build up and so maintain the structures and to make life and exertion possible. The importance of the latter is the more apparent, since wasting of the body is familiarly associated with decay of life; but, the former is so much the more urgent that, whereas the body may waste for a lengthened period and still live, it rapidly dies when the source of heat is removed or even greatly lessened.

All oxydizing processes result in the production of heat, more or less. The fats, sugars, and starches are more readily oxydized than the nitrogenous elements of our foods. It is generally assumed that our albuminous articles of food are the most important, inasmuch as they furnish the material for the upbuilding and sustenance of our body-tissues. However, this assumption is not correct without a proper explanation.

The different actions and processes of the body require, for their purpose, not only nitrogenous elements, but likewise the non-nitrogenous ones, such as the starches, sugars, and fats, besides certain mineral elements, the absence of the latter resulting in disease.

It is a faulty classification that groups foodstuffs into two great classes, that of flesh-formers and that of heat-generators; for, while a nitrogenous food is renewing flesh, it is also producing heat. Likewise, while a carbonaceous food may be generating heat, it is also producing flesh, in the form of fat.

The kind of food required at any time or place is in accordance with one's environment and conditions of life. Thus, in very cold climates, much more fat is required as food than is found necessary in warm countries. On the other hand, when great muscular effort is expended, and, in consequence, much wear and waste of tissue, then we find that larger quantities of sugar and the albuminoids are necessary as food. However, the amount of destruction of tissue going on each day, and requiring nitrogenous food as building material, is much smaller than is generally supposed. It also is necessary that the body be provided with a sufficient amount of the different minerals found in it, such as the salts of potash, soda, lime, magnesia, manganese, iron, and sulphur, as well as sulphuric, hydrochloric, phosphoric, then, lactic, acetic, and other organic acids, besides certain peculiar extractive matters.

The flesh, or the muscular tissues of animals, contain precisely the elements that are required in our flesh-formers—and, only limited in quantity—our heat-generators, also. The vegetable grains, when not interfered with by the miller, likewise contain all these elements.

Hence, our appetites and the bountiful provisions made enable us to extend our choice both to the vegetable and the animal kingdoms, so that it is possible to find vegetable foods on which man could live as long as on animal food alone. To illustrate this position, let me cite from the life of that remarkable American, Count Rumford.

"Benjamin Thompson, the Massachusetts prentice boy and schoolmaster; then the

British soldier and diplomatist, Colonel Sir Benjamin Thompson; then colonel of horse and general aid-de-camp of the Elector Charles Theodore of Bavaria; then major-general of cavalry, privy councillor of State, and head of the war department of Bavaria; then Count Rumford of the Holy Roman Empire and of the order of the White Eagle; then military dictator of Bavaria, with full governing powers during the absence of the elector; then a private resident of London, England; then a Parisian "citoyen," the husband of the widow of Lavoisier; but, above all, the practical and scientific cook."

His faith in cookery is well expressed in the following, where he is speaking of his experiments in feeding the poor of Munich. He says:

"I constantly found that the richness or quality of a soup depended more upon the proper choice of the ingredients and a proper management of the fire used in the cooking of the ingredients than upon the quality of solid nutritious material employed; much more upon the art and skill of the cook than the sums laid out in the market."

After reorganizing the Bavarian army, not only as regards military discipline, but in feeding, clothing, education, and useful employment of the men, in order to make them good citizens as well as good soldiers, he attacked a still more difficult problem—that of removing from Bavaria the scandal and burden of the hordes of beggars and thieves that had become intolerable. With persons of this description, any precepts, admonitions, and punishments more often fail than do good. Rumford, therefore, believed that, if we first make such people happy, we then have a better chance of making them virtuous. If happiness and virtue be inseparable, this end will be most certainly attained the soonest. It is much easier to contribute to the happiness and comfort of persons in a state of poverty and misery than, by admonitions and punishments, to improve their morals.

Having unlimited authority, he (in January 1, 1790), bagged, by means of the military, in less than an hour all the beggars of Munich.

Having captured these beggars, he proceeded to place them in a large building, previously provided, where everything was done to make them clean and comfortable. Work was provided for those able to work, and they were paid a proper wage for their labor. At first sight, this would appear to be a utopian scheme. But, experience proved the contrary.

At first, considerable expense was incurred; however at the end of six years, there remained a net profit of 100,000 florins, after expenses of every kind (salaries, repairs, etc.) had been deducted. The principal meal provided for these people consisted of a soup costing about 2 cents per meal for each person. The ingredients and cost per meal for each person, were a little less than two cents. At the present high cost of provisions, the same would cost about 3 cents for each person. When we come to treat on special food I shall give recipe for this meal.

A. T. CUZNER,

Gilmore Fla.

COLD AIR AND FRESH AIR

What Dr. R. Willman says—in his answer to Query 6,294, is just what I have found out long ago. There is such a thing as air being too fresh and too cold for people suffering from catarrhal or pulmonary troubles, and more especially while they are sleeping is too cold air very detrimental to many people who have throat and lung troubles. This I know to be true from my personal experience. It is not so bad when the person is moving about and during the daytime; however, cold air should be avoided during the sleeping-hours or when one is lying down.

This is why so many die so soon after going to the mountains and living outdoors. It is all right to live in the mountains, but, one should sleep in the house and breathe warm air or at least air not too cold. When the vital forces run low, as they do during slumber, the cold plays havoc all around.

M. E. JOHNSON.

Pittsburg, Kans.

A CORRECTION

In the July issue of CLINICAL MEDICINE, on page 522, we printed a poem, entitled, "Things not done before," attributing its authorship to our good friend, Dr. J. F. Roemer, of Waukegan, Illinois. Much to our regret, Doctor Roemer disclaims responsibility further than for having passed a good thing along. Whoever wrote the verses, deserves our thanks.

DELAYED DEVELOPMENT

I wish to ask information from our editors or the professional subscribers concerning the use of anterior pituitary gland. I have a patient under my observation, 18 years of age. He is a perfect specimen mentally, morally, and physically, except that, at the age of 7 or 8

years, without apparent reason, he ceased to grow and has grown very little since. He was a full-term, 7-pound baby, born of healthy parents, both of normal size. He has been abroad several times and has been examined by eminent specialists in nearly every country in Europe, as well as by those of America.

Will someone having had experience with pituitary gland kindly give me an opinion or information concerning it and its use in such cases.

L. B. SMITH.

Long Beach, Calif.

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[The results of certain experiments suggest that tethelin, the active principle of the anterior pituitary lobe, might be of benefit in this case. Has anybody had personal experience with this substance?—ED.]

INTOLERANCE: A CRITICISM

It would be hard to find anywhere an article written by a medical man bristling with so many contradictions, shining with so much luster of prejudice and ill-concealed selfishness as the contribution in the April number of CLINICAL MEDICINE, page 308, and signed A. D. Hard, Marshall, Minnesota.

In one breath, Doctor Hard admits the scientific basis and usefulness of Osteopathy and denies it in the next, together with the qualification of "that philanthropic gratuitive helpfulness" so "conspicuous" with "us regulars" (save the mark of self-complimentary bouquet!). I should have to repeat nearly every line of the article (heaven forbid!) to show where Brother Hard lacks logic and modesty, however, he ends his article as follows:

"Should ever any patient be so ill-advised as to lose confidence in our professional ability and honor and call an Osteopath for relief, that patient should be made to understand that he could never expect to be served again by a 'regular'."

Such sentiments as this display—to say the least—a spirit of resentfulness ill-becoming a true regular physician, besides exposing such to the charge that his personal financial interest overshadows his desire to help his patient—which, we must admit, is neither ethical nor good advice and betrays the individual physician to possess the very qualifications he condemns in the "other fellow".

We should not forget that there are Osteopaths and Osteopaths, just as there are M. D.s and M. D.s, and we should not condemn the science for the shortcoming of an individual practitioner.

It ill becomes us to be uncharitable toward other schools of healing, so long as we can not claim perfection in our own and so long as our patients are compelled—by our own shortcomings—to seek the help anywhere else that they can not get from one of us; for, neither vituperation, retaliation, nor even vengeance will convince the suffering patient that we are the only simon-pure, genuine doctors who "know it all".

Let us not forget that the spirit of intolerance won't help our cause, but, let us prove ourselves worthy of the confidence of the patient and superior in getting results, and then all the irregulars will become "has beens", their star will soon have lost its luster.

Yours for perfection, progress, and tolerance.

JAMES HEGYESSY.

San Francisco, Calif.

DOES WEALTH SPOIL A DOCTOR?

We often encounter nonsensical articles in medical journals, however, the limit is reached in the article titled "The Rich Doctor," by Doctor Howle, in the April issue, page 315. Assuredly riches in the possession of a man of stability of whatever profession are no hindrance to his development.

The doctor in Doctor Howle's illustration showed a lack of manhood, a lack of the enabling powers, by the fact that he would marry a half-idiotic girl, live with her and bring into being half-idiotic offspring. A man of his temperament would fall, irrespective of what profession or calling he may be following. There are hundreds of men in the medical profession who have made money, and they are as honorable as men in any walk of life.

The money-ruined young man is more prominent and more notice is taken of his movements than is the no-money young man, who is given only passing notice. It has always been a popular delusion that the poorer a young man is when he starts in life, the better it is for him. I know it is very unpopular to take a different view, but, no greater falsehood ever was prated before the public. True, many poor boys have become successful and famous, but, their poverty was the least thing that contributed to their success. While these few were notable

examples of success, thousands of young men with just as noble aspirations and as kindly hearts have failed because they lacked the one talent, that of making money.

Among a large acquaintance of men, I find the doctor above the average in stability of character and manly disposition. Who more than he deserves the many little comforts and moments of recreation and pleasure that money alone can aid him in procuring? No one, except the good wife, who deserves all the comforts that money can buy, and a few luxuries for good measure.

Doctor Howle certainly is wrong. A careful reading of his article will convince any one of the fact.

F. F. PETTY.

Lawrenceville, Ill.

CURRENT COMMENT BY A COUNTRY DOCTOR

The Gall-bladder in Typhoid Infection.—H. J. Nichols, U. S. Army, in *The Journal of the American Medical Association* for March 31, shows that the gall-bladder may be, and often is, the disseminating point for infection in typhoid- and paratyphoid-carriers. The human bile is insufficiently alkaline to render it lethal to microorganisms of typhoid and paratyphoid fever and probably to those of cholera, dysentery, and other water-born diseases. He demonstrates the possibility of disinfecting the bile, by increasing its alkalinity, by the administration of sodium bicarbonate. Bile infection being demonstrated in duodenal contents, 6 Grams of the sodium bicarbonate is given daily for a week, when examination of the same secretion proves negative.

This should have important bearing both in handling typhoid-carriers as hosts and upon the treatment of both, typhoid and paratyphoid fever. According to Major Nichols' findings, if an alkaline course is given as adjunct to other treatment in enteritis, a well-protected nidus of infection should be reached, and thus a further aid to treatment be placed in our hands.

Those flies—here they are again. "Swat the fly" is all right, but, it is a very slow way of combating creatures having a method of reproduction by multiplied geometrical progression. The house-fly starts from the stable. A Government bulletin on the subject states that 1-2 pound of powdered hellebore-root in 10 gallons of water will destroy all fly-larvæ in 8 bushels of horse-manure. This makes the cost less than one cent a bushel (no late price on the article is before the writer), and the method deserves being put into practice. Let the physicians do all they can in this matter, both by example and lecture. Tell the people again this season that the fly is a filthy horror, having its genesis in the excrement of horses; that its play-places and feeding-grounds are human excrementary matter and all things of unmentionable filth. Once more tell your clientèle that it comes with filth- and germ-laden feet to pollute our food; that it leaves death in its wake. Create a picture of horror of this creature in the public mind. If fear in any form must be put into the child's mind, make it fear of this ever present killer of thousands, instead of fear of imaginary bogiemen and wild beasts, which, despite the spirit alleged to have been shown by the readers of Elijah's juvenile tormentors, are a negligible factor in presentday civilization.

Night Administration of Medicine.—Again attention is called to the fact that inimical organisms that invade the human body have no office-hours or sixteen-hour limit to their activities. Unless, under the theory of self-limitation, we are to concede them the field, it is well to consider this fact. Under ordinary conditions of general practice, there is neither a day-nurse nor night-nurse, outside the members of the family—and, it is so hard for one to get up from sleep when the patient seemingly is doing well. Nevertheless, the loving and watchful mother or someone else of the household can be depended upon to answer the call of the alarm-clock, say, twice during the sleeping-hours in case of malaria or other disease where medicinal effect must be maintained beyond the time of the drug's elimination. An interval of rest and recuperation for the invading horde is likely to accomplish more for the microorganisms than for the patient. The explanation may be offered that, while realizing the theory, and usually the fact, that sleep is nature's sweet restorer if undisturbed, it, still, is of importance that drug-action be kept up until the removal of the cause of the disease and that after a certain time elimination has taken place. Sense must be used in this, as in all other details of treating the sick, but, here is a frequently overlooked point. A recent writer in *The Journal of the American Medical Association* describes the successful handling by himself of a malarial endemic in Mexico mainly because he attended to—what his predecessors had overlooked—the important measure of maintaining an established saturation of the system by a nocturnal, as

well as diurnal, administration of the antiperiodic employed. Of course, indiscriminate awakening of a patient for medicine is a very bad practice; however, failure to wake him, under certain conditions, is very much worse.

The Vernal, Rhus Tox. Season.—Springtime is the season that causes the annual rebirth of nature, and, with it, a resumption of plant metabolism; not only is there a quickening of the blood of the "spring-poet," but, all pulses are quickened in the animal and in the vegetable worlds. Down here, in Alabama, we do not have to await the revival of the frogs; they sing for us each warm day all winter through. But, the birds! During the winter, our own year-round stayers, as well as the multitude of northern migrants who, satisfied with the local winter-climate offerings, forego a trip across the Gulf and Caribbean, have been silent save for their accustomed business and assembly calls, this, with the exception of the Carolina wren, which has an optimism that compels its cheery note regardless of season or weather. This lively and perky little citizen always has time to stop and emit its cheery four-note call. Almost always it gets answer from a distant grove or hillside, and it pauses in its foraging at frequent intervals to whistle and receive a reply of encouragement and good cheer. Before late March, however, it is necessary to pay close attention, in order to separate the note of little wren from that of the countless others coming from out of hedge and woodland.

Now is the time to enjoy the hunting-season—if one, like the writer, pays utterly no attention to the bird- and game-laws of state or nation. One can go right out into the woods and hunt to his heart's content the year round, just as he uses, as weapons, his own eyes, an opera-glass or a camera. Just pursue the sport of getting acquainted with your little feathery neighbors anywhere and at any time. One horseback-ride enabled the writer to get identifying glimpses of 35 species of birds; then some of the usuals were replaced by a few of the scarcer ones; yet, time was not taken to search tree-tops for migrant warblers and kinglets. Just go into a quiet seat on a log or even run your machine into a shaded spot, and see how many bright-eyed little visitors come within a few feet of you. Do not live so fast! Your little feathered friends will not interfere with your relaxing, and perchance solution to some grave problem will flash across the mind in its relaxation or when centered upon the study of nature. The subconscious works all the time, and the better for an occasional change and, if one does not know the birds, he has been missing a great, great deal all these years.

Afraid to go out into the swamp by the creek because of rhus radicans or tox.? No need of it. Perhaps some of you have smiled at the articles in last year's CLINICAL MEDICINE about eating the middle leaf of the apical rhus triad. That middle-leaf business is mostly bosh. However, it insures identification, nothing else similar-looking having those three leaves; also, it gets the most certainly fresh-sap-filled of the trio.

In view of extended research in the matter of immunity, the creation of antibodies, use of autogenous vaccines and many other late developments, it is up to us to stop shrugging at the mention of Hahnemann's name and his expounding of the law of "*similia similibus curentur.*" Samuel was largely working on the right lines—as usual, with a phenomenal and rebellious mind, ahead of his time—and it must be conceded that there is at least something in this theory of Hahnemann's. If rhus has been the spoiler of boyish picnics and later of fishing-trips, just you try this plan. No harm will result to the buccal cavity—to this the writer can personally testify—and immunity will result. Eat a few of the leaves during the first few trips into the woods this season; two or three will suffice. The tincture of rhus will serve; still, for some reason, the fresh leaves seem to be best.

Treating Rhus-Poisoning.—As to the treatment of developed rhus-poisoning, we have heard of about as many cures in these years past as we have for gonorrhea ("runnin' range" the negroes call it), and probably this multiplicity is for the same reason. My individual conclusion is, that in the early stages of rhus-poisoning rubbing the affected parts with spirit of nitrous ether is very beneficial. This may be because of the 91-percent alcohol required by the Pharmacopeia, inasmuch as results also can be obtained from plain alcohol, while chloroform likewise seems to be effective. These fluids appear to dissolve or neutralize the poison. With the condition well developed, *especially when the skin has been well scratched*, an infective dermatitis is the result. This must be treated according to indications. Carbenzol and echinacea-lotion are among the most beneficial local applications; also, a strong solution of magnesium sulphate is good. Bathing the parts with spirit of nitrous ether before initiating other treatment

is desirable, so that the remaining not neutralized rhus-poison may be cared for.

Another Item From Aunt Jezebel's Wisdom.—Coming down the "big road" recently, we met a negro having two little children with him. "Where you bound, Jim?" "Over to Uncle 'Liases ter git er blind horse ter breathe on dese heah chillum! Hit suah will keep de whoopin' cough off." Questioned upon the subject, Aunt Jezebel admitted it to be her prophylactic prescription; she also stated that "hosses' milk, jes like de colt gits, hit'll cure dat der whoopin' cough as quick as doctah's medicine." Had Aunt Jezebel said, the medicine of *some* doctors, our agreement with the statement would have been unqualified.

We Want More Money.—A contributor to *The Medical Council* makes remark that the average income of a freight-conductor exceeds that of the average physician. That, doubtless, is true. And, there is an excellent reason. Your freight-conductor has an organization the primary objects of which are economic. Physicians have organizations with other primary objects, at least in most instances. The conductor does so much work for so much pay. We doctors work in competition with each other, hence, have no right to object to others who, having thoroughly learned the lesson of cooperation and group-dealing, are better rewarded than are we. This despite the fact that we often are employed by corporations, and that, in the last analysis, all our work is for the greatest of all corporations—an organized entity known as the public.

Corporation A carries insurance with corporation E, which munificent concern has agreed to pay for first-aid to the injured, then protect against damage-suits, either by compromise or legal battle. Dr. C gets one of the injured employees of A. "First-Aid" must be given under general anesthesia. Then he is loaded with the case, being aware of his legal and moral responsibility. The patient will not pay C, and the latter himself has probability of a law-suit on his part, to get more than "first-aid" payment according to a schedule laid down by B, who is possessed of almost sublime effrontery. In an isolated place, C is the only physician available; in larger places, competition is so strong that he takes the case with feelings of temporary thanksgiving, because the corporation designated as A is too small to have a company-doctor of its own. Competition with his fellows is so strong that he dare not refuse the case without first having a plain contract signed, to receive remuneration for what his professional judgment tells him should be done for the patient.

Now let us suppose that C is a unit of an economically organized profession and that A and B are compelled to do collective bargaining with him. Would the difference in result justify Doctors A to Z in getting together? Would they not receive substantial benefit from dropping their own little jealousies and the present inharmony? Hark back to the cited comparison with organized labor; certainly, our superior intellectual attainments have not resulted in more frailties than have other groups engaged in social service?

Perhaps the trouble is, that we refuse to be considered under the same head as the proletariat, even though we be respectfully mentioned as of the intellectual proletariat. Briefly, is not the tendency of the medical profession to consider itself upon an utterly different plane than that either of organized labor or intensively organized commercialism? This, while compelled to make competitive fight for existence commensurate with demanded high-plane living. This writer lacks both ability and effrontery to offer himself as a Moses to lead the medical profession out of the wilderness of economic pressure. If he can aid a bit in spreading the psychological store of discontent, which needs must precede evolutionary progress of an individual or group, thus causing more thought along these lines, more effort to solve this perfectly solvable problem, he will be satisfied. The point is, that the medical profession is not, as a whole, getting what it is entitled to in this age of "efficiency" and complexity.

We want more money! How shall we get it?

"Oh! That man is sore about something," I think I hear.

Cheerfully admitted. This time it is about acting as his own anesthetist and having to utilize nonsterile bystanders for nurses and assistants, then following up repair of extensively lacerated and infected tissues with repeated chlorazene dressing, soaking, and irrigation. A couple of injections of hyoscine and morphine simplified the lonely anesthesia; the workman has a hand saved, with normal function, but—where is the doctor coming in? He knows that he will have no malpractice suit about this case, that he saved a fellow creature from being a cripple for life and—he can sue for his money. In younger days, he might have added to the plus side the supreme satisfaction of imagining

mhiself a brilliant surgeon; now he is just reasonably pleased to have gotten by with good results. His main regret is, that the incident did not do any good by having happened to someone not already cured of reverential love for profit-basis insurance companies. Some will need a lesson.

Psychotherapy.—Friend Doctor Butler, were he accused of narrowness, could acquit himself, through his recent articles in CLINICAL MEDICINE, on the psychological factors, methods, and aspects of medical practice. One does not have to be an adept of the "ancient wisdom," nor yet even a hypnotist, to realize that there is an everyday practical side to his subjects and that the importance of larger knowledge thereof is being forged on the world. Once adrift from the materialistic anchor, one becomes more and more convinced of the actuality of psychic phenomena and of their transcendent importance in human affairs. Rejection, by the scientific mind, of gods arbitrarily whittled from wood, chiseled from stone, poured from molten metal or fashioned from the age-hardened ruts of the human mind are liable to cause a revulsion toward materialism.

But, after all, this is really a psychic, and not a materialistic, age. We all, at least unconsciously, acknowledge psychic force. Why, doctor, is your last look before going out to see a patient into the looking-glass? Why do you dress up so particularly for a confinement-case? Why—if you are a success—do you take full possession of the sick-room, together with everything animate and inanimate that therein is? Why say that "This medicine *will* do so and so?" Self-possession and self-confidence aid in establishing a sympathetic bond between you and your patient including his family. This bond generates the confidence in your ability to help, which is so important a factor in your success. Self-possession is, at least, aided by a good appearance.

Tribute to a Friend Passed On.—He was an able man, a skilled professional gentleman, abreast of the progress of the time. In consultation, mentally reciprocative, yet, free with well-balanced suggestions. He left in the house of illness a better impression of his consultant than he found, and with the consultant at least the impression of helpfully shared responsibility. A care-burdened friend could go to him and get his help; above all, his sacred confidence. His praise was sincere, while his condemnation of others was no worse than a deprecatory frown. Such a friend did the writer, the medical profession of Alabama, and the people of his community lose in the recent death of Dr. R. F. Monette, of Greensboro.

A. L. NOURSE.

Sawyerville, Ala.

CHILDBIRTHS AT ADVANCED AGES

In a recent number of CLINICAL MEDICINE (April, p. 304), one of our contributors reported a case in which a woman gave birth after the age of fifty. In the editorial comment, we referred to some other cases mentioned in the literature. It is interesting to know that several reports of a similar character have recently been reported in *The British Medical Journal.* Three physicians tell of women who had children at the age of 49. Dr. E. R. F. Mason (*Brit. Med. Jour.*, March 31, p. 442) tells of a woman who was born February 13, 1820, married in 1840, and was delivered of her youngest child on April 21, 1871. She had 11 children. The data are verified by local authorities.

AILMENTS OF THE MAMMARY GLAND

Without a doubt, the rarest anomaly of the breast is, their entire absence. Few instances are noted, however, where one breast is well developed and no apparent evidence exists of the other. On the other hand, imperfect development of the mammary glands is common and is sometimes seen in a very marked degree in cases of infantile or absent sexual organs. Another rare abnormity of the mammæ is hypertrophy occuring especially in women in their twenties. Asymmetry usually accompanies this condition, which, when congenital, has been known to be diminished by lactation. An overgrown mammary gland, therefore, is not a contraindication to suckling the child.

Somewhat more common than is generally accepted are supernumerary breasts and nipples, and, according to Leichtenstern and Bruce, this anomaly is twice as common in men as in women. In polymastia, the accessory glands occur with no regularity in situation, but they are most frequent on the pectoral surface below the true mammæ and rather nearer the middle line. No definite explanation has been given for the presence of mammæ on odd parts of the body, although Ahlfeld accounts for that condition by the theory that portions of the embryonal material entering into the composition of the mammary gland are carried to and implanted upon any portion of the

exterior of the body by means of the amnion.

Anatomical anomalies of the nipple may unfit it for nursing, the most faulty developments of which are inverted nipple, fissured, hollow, stunted, or mulberry-, cone- and mushroom-shaped nipple. These conditions may be enhanced and aggravated by the child's gums, and the nipples are oversusceptible to fissure and ulcerations, making it almost an impossibility for the child to take hold, as in inverted nipples. During pregnancy, the nipples should always be examined, and, if they are inverted, a systematic attempt should be made during the last month to draw them out with a breast pump. If this is not successful, a nipple-shield may enable the child to nurse.

In very rare instances, milk secretion has occurred in very old women or very young girls after operations upon the ovaries, at the menstrual period; even, also, in adult males. This is an exceedingly curious anomaly of milk secretion, the abnormalities of which come under two headings, namely, quantitative and qualitative.

Complete absence of milk is very rare, although deficient milk secretion is by no means uncommon, being due to many causes, such as premature maternity, if the individual is not yet fully developed, and to advanced age. Lack of development in the glandular tissue is perhaps the most frequent cause, and may depend upon the continuous pressure from the clothing, be hereditary or be associated with a defective development of the remainder of the body, especially of the genital organs. As for treatment, there is no single plan that will increase a deficient milk supply. Usually the child must be fed artificially.

Quantitative anomalies, by excess in the milk secretion, may take three forms: polygalactia, hyperlactation, and galactorrhea, all of which offer stubborn resistance to treatment.

Whenever a woman suffers from breast troubles, she should go to a surgeon who specializes in ailments of the mammary gland. This attention will reward her often in health, happiness, and in life itself. Cancer of the breast is often prevented, if little irritations of the nipple or harmless tumors inside this nursing-gland are thoroughly removed. Mild measures, to relieve breast disorders, not only are generally unavailing, but they comfort the girl or woman to her own injury by a delay of complete treatment. Pains in the breast, however, at those regular physiological intervals to which women are subject, are not serious. Treatment with corpus luteum, the extract of sheep's or sow's ovaries, frequently alleviates this trouble.

Mastitis, or inflammation of the breast, with or without abscesses and milky discharges, requires a surgeon's treatment, if future trouble, years hence, is to be surely avoided.

The acute abscesses which occur in mothers with nursing babies, more peculiar to those with their first child than later on, often are due to the irritation of the nipple, which is shrunken, drawn-in or cracked. Sometimes they are the result of excessively rich milk and of the presence of pimples, boils or abscesses on the skin. These dermal disorders are evidence that microbes have gained access to the flesh, lymph, blood stream or milk-ducts. When the lacteal ducts are thus invaded by the cocci, which cause pus formation, the sweet milk present acts as our incubater for them. The breast may at first feel only uneasy, to be followed later by the young mother's telling of a chill or slight rigor, followed by fever. Soon or late, redness, lumpiness, soreness, and the other local signs of inflammntion herald the coming abscess. The wise doctor, at once puts the affected side at rest. A sterilized silk handkerchief is used to suspend the breast and keep the weight up, the infant is put temporarily upon a bottle, and the milk is drawn off with the breast-pump. Belladonna and glycerin is then applied, to stop the milk secretion, while, if necessary, the abscess is laid open and drained of the matter. Epsom salt given as a laxative helps to check the flow of milk in the breasts.

Nursing mothers having abscesses in the breast are susceptible to typhoid fever and other infections to a more lamentable degree than are well women. If they happen to be in a maternity ward of a general hospital, the risk is very great, and rigid precautions about nurses who have left typhoid- or erysipelas-patients must be taken. For this good and sufficient reason, maternity-hospitals should never be connected with general hospitals, and general hospitals should never be allowed to have maternity wards in the same building.

An ill-defined, slightly tender, hard, tense or elastic swelling in the breast unattended by redness, bagginess or fever, with or without enlarged glands in the armpits, may be only the scar of an old abscess, it may be a chronic abscess or it may mean a cancer of the breast. Only by opening

the breast completely, can an honest surgeon be certain of the difference. The woman who agrees to abide by the "guess" of the fine physician in whom she has "every confidence in the world" will make a sorry end of it, if the little lump is a cancer.

Once in three times almost, a lump in the breast becomes a fatal, malignant growth, if it is not whole-heartedly removed. Many good doctors coincide with the dislike or refusal of their fair patients to submit to a breast operation. They "take a chance" on the "twice in three times" noncancer. Obviously, therefore, if an individual is the third woman, she will have a cancer and die, because she was afraid of the surgeon who would have preserved her life and restored her health.

With the thick skin and flesh intervening, it is a frank lie for any of the "best doctors" to assure a woman that the lump, the scar, the cyst, the tumor, or whatever it is that is in the meshes of the breast is not a cancer or will not become a cancer. Pain, enlarged lymph nodes in the armpit, open sores, and retracted nipples come too late in cancer. That is to say, ere these "sure signs" of cancer show their gory heads, the surgeon's skill is of little avail. Lumps and tumors, be they ever so small, must be removed before this occurs.

LEONARD KEENE HIRSHBERG.

Baltimore, Md.

THE TREATMENT OF SUMMER DIARRHEA

Summer diarrhea is caused by irritation of the bowel through toxic products of pathogenic microorganisms, present in contaminated food. The flux is a protective provision of nature to get rid of the cause of irritation, and it should never be checked by the administration of astringents before the bowel has been thoroughly cleansed by a few small doses of calomel followed by saline laxative, or, even better, a large dose of castor oil, using one of the many pleasant preparations of this ideal remedy if the usual oil of commerce is too unpleasant. It can be disguised effectively, however, by orange juice. Castor oil fulfils the role of nature's cleanser by starting an active peristalsis in the small bowel, which sweeps downwards through the whole length of the alimentary canal. This is the first requisite in the treatment and, if followed by abstinence from all forms of food for twenty-four hours or more, boiled water cooled to taste being the only drink permitted, the patient experiences a decided change for the better. During this period of the treatment, mild astringents may be given if the movements are too frequent, and there is none better than the intestinal antiseptics (combined sulphocarbolates) in not too large doses, say, three to five grains dissolved in water, every two or three hours. In conjunction with this astringent and antiseptic, copper arsenite in 1-100-grain dose may be given in the presence of cramping pains and frequent fermented stools. If the pain is not removed by the cleansing dose of castor oil, small doses of codeine sulphate should be given until relieved. In case of collapse, a hypodermic injection of atropine, 1-250 grain, repeated in an hour or two if necessary, is promptly followed by flushing of the skin and a lessening of the number of colliquative stools. Glonoin under the tongue is prompt in action and assists the slower acting atropine.

After twenty-four hours, give, in boiled water, one ampule of bulgarian bacillus bouillon every four hours. This is especially good in children and the relief is quickly manifest.

Buttermilk is a good substitute, where it can be obtained fresh and clean. Egg-albumen lemonade is nourishing and pleasant to take. Milk should be sterilized. Other food may be added as the bowels show improvement, keeping up the antiseptics for a time, however, to restrict bacterial action in the large bowel.

R. J. SMITH.

Bancroft, Idaho.

WAS IT TACT OR WHAT WAS IT?

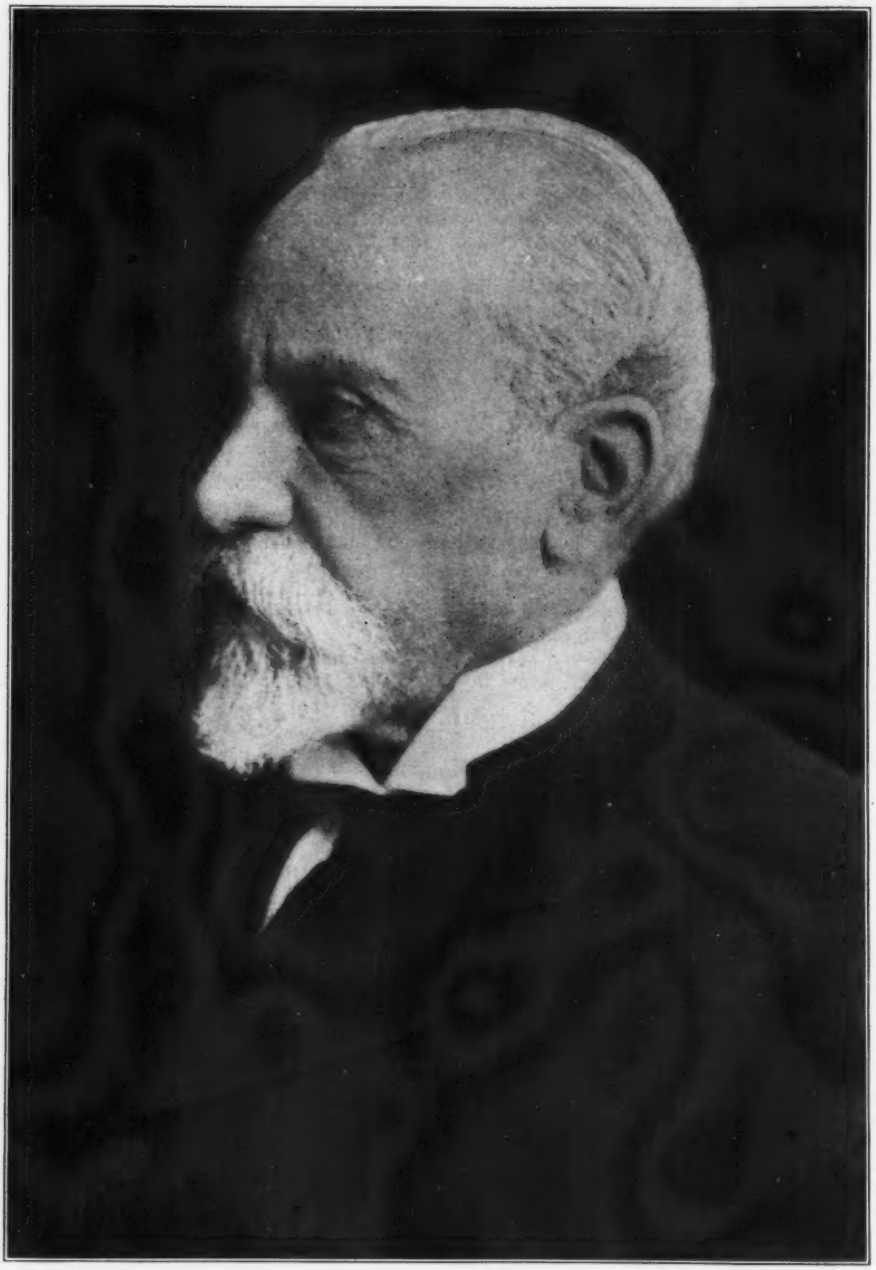
In a recent number of *The Nurse*, it is related that, in a well-known New York hospital, a 7-year-old lad was being examined by a surgeon, to ascertain what injuries had been sustained in a fall into a 12-foot excavation. Suddenly the boy said: "I wish I could sing. I think I'd feel weller!"

"All right, laddie, you may sing if you will sing something nice," said the kind-hearted surgeon. Thereupon, in a high soprano voice, the boy began to sing "Nearer, My God, to Thee."

"Well, I guess you're all right, little man," said the doctor, as he finished his examination. "I can't find any broken bones."

"I reckon 'twas the singin' that fixed me," replied the boy. "I always sing when I feel bad."

Was it the doctor's tact or the boy's singing that helped? We wonder . . . . . .



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GUSTAVE ADOR, PRESIDENT OF THE INTERNATIONAL RED CROSS

In the World War

THE WORK OF THE EXEMPTION BOARDS

No doubt many readers of CLINICAL MEDICINE are today engaged in the same task as one of the members of the editorial staff of CLINICAL MEDICINE—Burdick—i. e., the great draft of men for the National Army. In the twenty-sixth ward of Chicago there are three of these exemption boards. In the Ravenswood division, the fifty-ninth, 3141 men are registered.

We think we have an unusually fine body of men. Although we have representatives from almost every nation, every man except four was able to sign his own name to the exemption card. There was one young man of unsound mind, whose name was signed by his father. The three illiterates were all men of foreign birth. We had three negroes and three Chinamen. Two of the Chinamen were apparently fairly well educated men, one of them being a medical student. We had probably a dozen who were born in Turkey, most of these, however, being Armenians. There were many Germans, Austrians, English and Canadians, and a scattering of Greeks, Italians, Roumanians, Swedish, Norwegians, Danes, French, and Belgians.

Probably a dozen applied for exemption on conscientious grounds. Of these, one was a Christian Scientist, another a member of the pentecostal church—an Englishman by birth. Apparently we have no Quakers in Ravenswood.

After the physical examinations have been made, no doubt we shall be able to develop some facts of interest to the readers of CLINICAL MEDICINE. By that time we hope to hear from other readers of the journal who are doing this work.

MORE SURGEONS NEEDED FOR THE ARMY

Surgeon-General Gorgas authorizes the statement that in spite of the generous response to the call for surgeons, there are still many vacancies, both in the regular and reserve corps. He urges upon the profession the country's need for physicians to fill these vacancies in time to secure ample training in the duties of the military surgeon and sanitarian.

Those entering the Reserve Corps will serve for the period of the war, while those who go into the regular service will form a more permanent connection with the Army. Examination for commissions in the regular army service are held on the first Monday of each month. Applicants for a commission should apply directly to the Surgeon-General. Those who wish to enter the Medical Officers Reserve Corps should apply to the nearest examining board.

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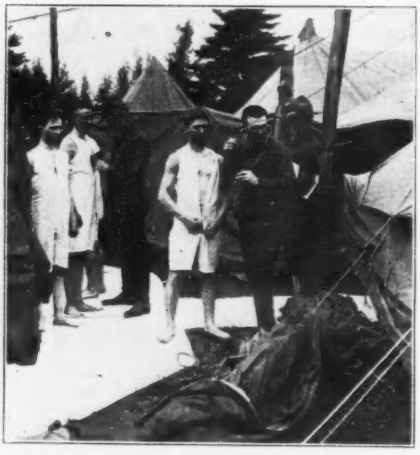
Medical Staff of the Johns Hopkins' Unit, now in France. In addition, this detachment contained 100 nurses and 160 other college men.

FROM THE FIGHTING-LINE IN FRANCE

There is one idea that I should like to impress upon your readers, and to have them take it to heart and act upon it, and to have them communicate it to every American citizen with whom they come in contact; namely: that it is necessary, not only for the sake of civilization generally, but for liberty in our United States, that every American realize—I say realize—that we are in war with a powerful, cruel, and unscrupulous enemy who has boundless ambition; and that every man of us should feel

that he has a personal duty to do, which should be begun right now.

I wish I could convey to you my impressions of the war and of present conditions here. But, if you gave me your entire space, I could not do it. Words seem useless. I had read before coming to France, as you and many others have read, numerous newspaper accounts and magazine articles of conditions in the zone of operations and the effects of the war, and I have heard speakers giving what seemed graphic descriptions of what they had seen and heard; but, now I comprehend what they meant when they said, "This is the best I can do, but it does not tell the story." Words seem to have lost their power to express what one thinks and feels and wishes to convey, and, besides, one suffers a sort of prolonged shock that paralyzes one's gift of expression.



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"Rookies" in the Plattsburg camp undergoing physical examination. Officers in our great new army must be absolutely "fit."

See for yourself the condition of this beautiful and once prosperous and happy land of France, witness the depletion wrought by the war of the manhood of this nation, note the evidences on every hand of the heroic sacrifices made by these people, and comprehend that in this tremendous struggle the cause of France and her allies is our own cause. Consider the history of the war, gather your information from men who have been in the fighting, visit the country that has been fought over, the lines of 1914 and those of today, and you will never for one moment doubt that, if by our being too slow and halfhearted in getting into action the military autocracy were to win the war on this side of the water, we should have to meet a very powerful enemy on the other side and should have far less help than we have now.

This war is not ended by our coming into the struggle or declaiming our intention to come in; nor near its end. Day before yesterday, as I visited a wrecked town and the battlefield of 1914, I could hear the thundering of the cannons and see the captive observation-balloons of the front of today. It is only a few miles that the enemy has been driven back with all this time and effort.

France needs men as well as food and money, and she needs them right now. With the soldiers, she needs doctors—and military medical officers are not made in a day. Every physician capable of service should offer himself to his country today. Let there be no delay. Do not listen with patience to him who says, "I am willing to serve if it gets so that I am really needed, but, it is not so bad yet and may not become so." Tell him, if he is capable of a man's work, he is needed now.

Just now, I am about ten miles behind the lines. The great guns are sounding like thunder on the horizon. The aeroplanes go over our heads a dozen times a day with a noise like that of planing-mills. Sometimes we hear the rattle of the mitrailleuses, like riveting machines, when enemy's aircraft try to come over the line and the antiaircraft guns put in a few short remarks and we can see the little puffs of steam-white vapor where the bursting shells chase the flyers. But, "it is very quiet in this sector" and not much for us to do just at the present. I am serving as surgeon with a military transport organization, under French army officers. Conditions differ a good deal from any experience with our army in '98, and, yet, all that experience helps. Once more I would urge your readers to get into the work.

SAMUEL W. KELLEY.

"In France."

PROTECTION FOR THE SOLDIER IN TRENCH WARFARE

Perhaps the most useful mechanical appliance for the soldier's protection is the steel helmet. The French helmet is more graceful than that of the English; it even has a ridge, which is reminiscent of the

ancient socket for the plume. However, it is not as efficient as the English headcover, which latter looks like anything but a helmet. A regiment of soldiers who have donned it as they start for the front line remind one irresistibly of a lot of Chinamen, especially if seen from an elevated point. This admirable protective device has a flattened form, so that shrapnel-bullets and bomb fragments may more easily glance off. It is made of steel containing 12 percent manganese, which makes it tough and less likely to splinter. It will hold up a shrapnel-bullet, but not a rifle-bullet, except when fired at a greater distance than 1200 yards.

At the suggestion of the lamented Sir Victor Horsley (who since then has died in Mesopotamia), the helmet is padded with an inflated rubber lining all around, to prevent the soldier from being knocked out by concussion. The shrapnel-bullet does not go through, but makes a dent in the metal. The helmet catches the bullet as the yielding hands catch a hot baseball.

The modern bullet makes a clean, healthy wound, but, the rifle-bullet striking the helmet at close range becomes an instrument of destruction, since the helmet flattens the bullet before it penetrates and converts it into a dumdum missile. The metal of the helmet is thin and light, being a little thicker than stovepipe iron, and it weighs 2 pounds.

Gauntlets quilted with flake or carded cotton ("cotton wool" they call it here) are supplied for grasping barbed wire.

Soldiers are being blinded in this war in distressingly large numbers. A shrapnel or bomb bursts into a thousand pieces, and the concussion sets aflying splinters, pebbles, bits of wrist-watches, and the like. Even a tiny chipping left in the eye may cause blindness. Lieutenant Creeve has introduced a visor of chain mail to hang down from the front of the helmet and protect the eyes, and there are good reports about the 100,000 visors in use. The lower edge is tied back against the cheek, to guard against missiles from below. It is ineffective if permitted to hang floppy.

The digging, the hiding in trenches, the immense amount of factory-like work or of navvy work makes modern war tedious enough. When to this are added these various accoutrements for the individual, the will and spirit seem to be burdened too much. So, it is not surprising that the soldiers do not want to be protected. They dislike so much "truck" and often fail to make use of it at the right time. Many are blinded, suffocated with poison gas or wounded when they could have prevented it.

One who goes into that very terrible snowball fight called a bombing expedition takes his life in his hands. The outfit for grenadiers and bombers must be complete. From the waist down to the hips, hangs a cylinder of steel of the same quality as that of the helmet and weighing 14 pounds. This will stop a bomb or a revolver-bullet. The chest and neck are protected by a garment made of twenty-five layers of silk or cotton wool, and proof to bayonet thrust, shrapnel, bomb or revolver shot. Of course, the cylinder and the quilted garment will have to extend all around, not on account of the soldier running away, but because the foe is as liable to toss a bomb or grenade over behind him as in front of him. For additional protection, especially for the head, the bomber may carry a shield made of chrome steel, like that used in the "tanks."

Mr. Stephen Jones, of Richmond, Virginia, is here offering body armor. The government not having passed upon it, its details are not known. The Germans are said to have a bullet which at close range will get through an inch of steel weighing 40 pounds to the square foot.

WALTER M. COLEMAN.

London, England.

THE "NEW YORK MEDICAL JOURNAL" AMBULANCE

The A. R. Elliott Publishing Company, publishers of *The New York Medical Journal*, has presented a fully equipped ambulance for service at the French front, through the Montclair, New Jersey, chapter of the American Red Cross (*N. Y. Med. Jour.*, July 7). At the meeting of the Montclair chapter, at which the presentation was made, $317,000 was raised for the American Red Cross. This was probably the largest amount of money subscribed for the Red Cross by any city in the United States of less than 25,000 inhabitants, being an average of $13 per capita for every man, woman, and child in the town.

The A. R. Elliott Publishing Company has so long been in close touch with the medical profession and with its work, through the publication of *The New York Medical Journal*, that it seems eminently fitting for this company to express its service to the country at the present time in this particular manner.

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These pavilions are being erected for the new Columbia War Hospital, of Columbia University. Five hundred beds are provided for. These buildings are of a type to be largely used in this country. At the Walter Reed General Hospital, Washington, 1000 beds for convalescent soldiers will be provided in this way.

DISPOSITION OF RED CROSS FUNDS

Of the $100,000,000 recently raised for the American Red Cross, it is stated that $10,000,000 will be employed in Italy, $1,000,000 in France, $200,000 in Russia, $200,000 in Roumania, and $100,000 in Armenia. The Red Cross has now at work in France a commission of experts, and a similar commission has been sent to Russia. The latter is headed by Dr. Frank Billings of Chicago. It is the purpose of the Red Cross to send similar commissions to Italy and Roumania, and also to appoint a commissioner to Great Britain.

Mr. John D. Ryan, president of the Anaconda Copper Company, has been appointed director-general of military relief, to succeed Col. Jefferson R. Kean, who is to be placed in charge of the 160 United States Army ambulance sections in the theater of war in France.

THE ROAD TO FRANCE*

Thank God, our liberating lance
Goes flaming on the way to France!
To France—the trail the Gurkhas found
To France—old England's rallying ground!
To France—the path the Russians strode!
To France—the Anzac's glory road!
To France—where our Lost Legion ran
To fight and die for God and man!
To France—with every race and breed
That hates Oppression's brutal creed!

Ah, France—how could our hearts forget
The path by which came Lafayette?
How could the haze of doubt hang low
Upon the road of Rochambeau?
How was it that we missed the way
Brave Joffre leads us on today?
At last, thank God! At last we see
There is no tribal Liberty!
No beacon lighting just our shores!
No Freedom guarding but our doors!
The flame she kindled for our sires
Burns now in Europe's battle fires!
The soul that led our fathers West
Turns back to free the world's oppressed!

Allies, you have not called in vain!
We share your conflict and your pain!
"Old Glory," through new stains and rents,
Partakes of Freedom's sacraments!
Into that hell his will creates
We drive the foe; his lusts, his hates!
Last come, we will be last to stay—
Till Right has had her crowning day!
Replenish, comrades, from our veins,
The blood the sword of despot drains,
And make our eager sacrifice
Part of the feebly rendered price.
You pay to lift humanity—
You pay to make our brothers free!
See, with what proud hearts we advance—
To France!

BY DANIEL M. HENDERSON

*This poem was awarded a prize of $250 by the National Arts Club.

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, *A. M., M. D.*

[*Continued from July issue, page 535.*]

THE first of these advantages pertains peculiarly to actual institutional treatment of chronic disease. The therapeutic procedures in acute disease are, as a rule, simple and readily applicable at the bedside. In hydrotherapy, for example, the tub bath, the pack, the sponge, the enema, the hypodermoclysis, and so on, constitute the usual items in acute cases, and all lend themselves readily to application in the sickroom. In chronic cases, on the other hand, the procedures most commonly prescribed are more elaborate, such, for instance, as the vapor cabinet, the shower bath, the needle bath, and all the various modes of electricity, which are not only not available in the home, but very rarely found anywhere else than in some specially equipped institution. The same is true of the dietary. It is exceedingly inconvenient, if not altogether impracticable, to maintain a given regime of dietary in the home. And, so, with all the other features of treatment. It is for the very purpose of supplying these lacks that the various well-appointed sanatoria offer their carefully thought-out advantages. Many of them, in addition, possess natural advantages in the way of medicinal springs, appropriate climates, and so forth.

The second named principle of institutional treatment is, perhaps, in reality, the most important to the chronic invalid. No matter how wise and well adapted a course of treatment may be laid out for him by his physician, it depends for its success upon the thoroughness, persistency and intelligence with which it is carried out. Failing these, it falls short of its purpose and disappoints both doctor and patient. But, the doctor has neither the time nor the opportunity to exercise a constant watch over this class of patients to see that they are properly and faithfully pursuing the course mapped out for them; and the average patient soon flags in his zeal, to say nothing of erring in the details of his treatment—often in some vital point, to err in which vitiates the whole procedure.

In the institution, this phase of the matter is taken care of for him, almost automatically as to its system and regularity, intelligently as to its technic and application. And, so, the therapeutic and hygienic measures, administered systematically and skillfully, produce their results steadily, quietly, almost imperceptibly, and the patient regains his normal condition as one acquires all normal things: by the establishment of a sort of unconscious habit, unobtrusively imposed upon him almost without his own volition. This is unquestionably one of the most valuable phases of institutional treatment in these chronic cases.

In the clientèle of nearly every busy practitioner of medicine, particularly in cities and larger towns, are always to be found certain patients who obviously cannot be treated to the best advantage in their homes. The numerous disadvantages under which the physician labors in treating certain classes of cases at home are too familiar to require enumeration here. Confronted with these difficulties and having at heart the best interests of his patients, he wisely refers them to an institution, where the obstacles with which he has had to contend can be overcome by the various and valuable advantages of sanatorium-treatment.

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Mental Effect of Sanatorium-life.—In the first place, there is a potent aid to amelioration in the mental effect upon the patient consequent upon a stay in a sanatorium, the very name of which suggests a return to health. The contemplation of a visit to a resort renowned for its healthfulness and beneficent influences often inspires the patient with hope of ultimate recovery from a prolonged and perhaps much brooded-over malady. This is not insignificant, and it should be thoroughly impressed upon the patient and emphasized by the physician who must assure him that he will surely re-

cover or at least be greatly improved by the care, diet, climate, treatment, and other measures that he will enjoy at the institution to which he has been referred.

It is of the utmost consequence that the patient should be induced to believe in the benefit of the treatment to which he is subjected. On the other hand, skepticism or hesitancy on the part of the physician frequently awakens an antagonism in the mind of the sufferer which only the utmost skill can dispel.

The atmosphere of a sanatorium should be one of hope and cheerfulness. From the medical superintendent to the bath attendant, there should come an inspiration to every patient.

It is becoming more and more evident, with a deeper knowledge of the etiology and progress of disease, that even the greatest disorders are in a measure subject to mental control. The malady may be incurable; yet, if a remnant of hope remain, the thought of the patient should be directed toward the hope of ultimate recovery. Particularly is this true of certain neurasthenic conditions, where frequently some persistent hallucination impedes functional strength and activity, also of chronic rheumatic affections. In cases where serious pathologic derangement is not apparent, a mighty leverage is available through timely suggestion and the salutary impress of the physician's thought upon the untoward brooding of the patient; and, even in such cases as advanced arthritis deformans, much can be done by the proper exercise of psychotherapy. Indeed, I should class this phase of therapeutic effort among the most promising aids to success in the treatment of disease, not only in sanatoriums, but in private practice as well.

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The Value of System.—Another advantage of an institution is the systematic and scientific manner with which the various treatments are administered. Each day, at certain regular specified times, they are administered—be it drug, hydrotherapy, electrotherapy, massage, Swedish movements or physical exercise—and it is a universally accepted fact that regularity in the administration of remedies, as well as of diet, is extremely important. Without the almost constant supervision of the physician himself or a skilled attendant, one can never feel sure that the desired regularity of treatment and systematic attention to meals is observed in the home-care of the patient.

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Advantages of a Trained Staff.—In the sanatorium, the patient is under the constant supervision of a competent medical staff and attended by trained nurses, which advantages will be readily recognized both by laymen and physicians. The practically constant attention of a physician, as found in properly conducted institutions, is desirable, not alone for the purpose of rendering prompt assistance in cases of emergency, but also that the progress of the case may be constantly observed and the value of the treatment noted from day to day; while the continued close supervision reflects favorably on the patient's mental attitude.

Moreover, the cases needing sanatorium-treatment usually require such methods as can be successfully adopted only in institutions equipped with proper apparatus operated by experts. Here, the nurses are skilful masseurs, and their faithful and experienced attention is of the utmost imporance in thoroughly carrying out the details of a beneficial rest-cure.

In a good sanatorium, the patient receives the benefit of a most careful and thorough diagnosis that is facilitated by conveniences not always accessible to the general practitioner. These include the laboratory-equipment for the complete and careful clinical examinations requisite in every case of disease, such as the analysis of the urine, gastric contents, sputum, blood or feces, besides radiographic work, and so on. Of course, these examinations can be carried out in private practice, but, by far the great majority of physicians do not possess the equipment or can not devote the necessary time and attention to such matters; while the delay and expense of having examinations made elsewhere is, sometimes, annoying both to physician and patient.

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Sanatorium-Equipment.–If the general practioner is at a disadvantage in respect to these analyses requiring a comparatively small equipment, how much more handicapped is he, when one considers the elaborate appliances with which all first-class sanatoriums are provided, for determining with almost mathematical precision the exact condition of the patient-dynamometers, to determine with accuracy the strength of each skeletal muscle group; ergographs, to demonstrate the effect of various therapeutic measures upon the resistance of the muscles to fatigue (an invaluable instrument in neurasthenic cases); spirometers, to determine to a cubic inch the capacity of the lungs; sphygmographs, sphygmomanometers, tonometers, the x-ray apparatus, and the various electrical

and other appliances for making accurate diagnoses, the repeated and intelligent application of which demonstrates with mathematical nicety the results of treatment, whether improvement or retrogression.

The preeminently essential reason for institutional treatment, however, is the fact that through its agency alone is found the necessary equipment for applications of the various hydro-, mechano-, and electro-therapeutic measures, which obviously cannot be installed in private homes or even in the physician's office.

With a well-furnished hydrotherapeutic department under the care of skilled manipulators and attendants, the patient is assured of the remarkable beneficial results to be obtained from the simple application of water or of mud-baths. In all well-ordered establishments, arrangements are such that the temperature, duration, pressure, and technic of the various hydriatric procedures are perfectly governed, so that the advice of the physician regarding the application of steam or air can be carried out with precision.

There is scarcely a disease in which some of the numerous applications of hydrotherapy are not of marked value, particularly in various chronic disorders. Indeed, many times the chief reliance is placed upon hydriatric methods, numerous eminent medical men being of the opinion that rheumatism and allied disorders, neurasthenia, and certain other severe nervous diseases can be benefited more by these than by any other treatment. Yet, hydrotherapy can be practiced satisfactorily and thoroughly only in well-equipped and carefully conducted institutions.

In conjunction with the procedures peculiarly available in a sanatorium, the numerous and varied applications of electricity may be utilized in a most complete and scientific manner, whereas, in a private office or in the home of the patient, these means could not be satisfactorily applied, because of improper or incomplete apparatus.

Coupled with the above-named advantages, must be considered the invaluable application of massage and the practice of medical gymnastics and physical exercise; important features of every first-class sanatorium.

The detailed explanation of the varied employment of these remedial measures need not be considered here; their superior advantages will be evident to anyone who gives the matter thoughtful consideration.

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The Influence of Change.—In the treatment of a large number of cases of chronic constitutional or nervous diseases, a very important factor is the removal of the patient from his accustomed surroundings and home-influences which, however well intended, are almost invariably deleterious. Oversolicitous friends and relatives may retard the recovery of the patient by keeping his illness constantly before his mind. Usually such patients can be greatly benefited by being removed to some pleasant remedial institution remote from the untoward influences of home-life.

In such a sanatorium, business-cares soon are forgotten amid new and pleasant surroundings. No sympathetic relatives or friends are there constantly to remind the patient of the worries and vexations incident to his accustomed vocation. For a successful recovery from neurasthenia and allied affections, especially, this is of vital importance.

Another decidedly important feature of sanatorium life is the establishment of regular habits of living. The patients are carried through the day in a systematic routine way that is invaluable in forming healthful habits. There are certain stipulated hours for eating, for rest, for sleep, for treatment, and for recreation.

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Diet.—Regularity in the matter of diet alone is of the utmost importance in most diseases, especially in gastric affections, and a careful, systematic regimen can, unquestionably, be governed most successfully in a sanatorium that devotes especial attention to this matter. Here, the diet suitable for each individual case can be furnished, and the physician may feel assured that only such dietary as he may prescribe is given to the patient, of which fact he could not feel confident while treating the patient at his home. Sympathizing relatives or injudicious attendants may, and often do, yield to the caprices and importunities of the invalid. Moreover, the facilities for furnishing a particular diet for one member of the family are not so convenient and complete in a home as they are in an institution having a special diet-kitchen in charge of a competent cook.

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Sanitary Living-Rooms.—Of less importance, but, still, worthy of careful consideration, is the sanitary and hygienic condition of the living-rooms of a sanatorium. The structure itself is, or should be, constructed so as to furnish the best-possible conditions for ventilation, light, heat, and so on, and should be regulated by the attendants according to

the individual interest and need of the patient. This seemingly small matter is of sufficient moment to demand our attention, since it is at times wofully neglected in homes, not only in the sick-room, but throughout the house, as nearly every physician in private practice can readily testify.

For cases in which the patients are not confined to the room or bed, there usually are, in institutions of high character, sufficient amusements and recreations calculated to please and divert the mind. These, of course, vary with the location and with the ingenuity and resources of the administration of the sanatorium. However, as a rule, there are pleasant outofdoor sports and recreations for those to whose condition they are adapted, and lighter indoor amusements for those deprived of open-air diversions.

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Social Advantages of Sanatorium Life.—While a sanatorium is not particularly favorable for the establishment of social functions, yet, among a large number of the refined and intelligent classes of people who resort to such institutions, one may be fairly sure of finding congenial associates with whom to pass the time pleasantly and thus be relieved of a certain sense of loneliness that otherwise might supervene among strange, and, in a sense, alien, surroundings.

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Climatic Environment.—In speaking of the advantages of sanatorium-treatment, one must consider the pleasing advantages of environment, the climatic, geographical, and topographical location, and, with these, the natural resources peculiar to the institution, such as mineral waters, springs, and the like.

As to the methods of sanatorium-treatment, they should be pursued according to the manner suggested by a consideration of the above-named benefits.

Each patient should receive a thorough physical examination, with careful laboratory tests; then, a correct diagnosis having been arrived at, the treatment should be instituted in a thoroughly scientific and systematic manner. Especial attention should be paid to the selection of a proper diet, according to the indications presented in any given case. Too much thought cannot be given to this question. Most patients who frequent sanatoriums suffer from a more or less impaired digestion, and it is a flagrant neglect in many of these institutions that so little attention is paid to this phase.

But, above all and through all, a veritably broad and scientific spirit should pervade the entire management of an institution for the treatment of sick people. Though there be peculiarly potent natural and acquired advantages to be found in a sanatorium, these separate factors should not be the dominating influence in its management. Such things as "fads" may be successful in some instances; nevertheless, any single method of treatment cannot be scientifically applied in all cases, any more than one single drug can cure all manner of diseases.

A sanatorium, therefore, to deserve the respect and confidence of the medical profession, as well as of the laity, must have in its medical department physicians of recognized character and ability who will conduct the institution on a liberal and strictly scientific basis.

Finally in recapitulation, all of the conditions mentioned as necessary conspire to create around the patient an atmosphere of psychic influence and suggestion that is invaluable in its effects toward recovery. Even the material efficiency of the place—its adequate equipment, with all that is necessary to carry out any and every scheme of treatment—gives him a feeling of security and confidence that is, in itself, an excellent groundwork for the actual treatment.

This is confirmed and justified by the thoroughness, the skill, and, withal, the lack of fuss with which the treatment is administered—a further most potent item in psychic influence. To the system and regularity of the routine of the place, his own mind and body respond with a similar habit of regularity that helps to restore rhythm and normality to his functions. He learns over again, while scarcely aware of it, the lesson of right living, and is being freshly inspired with courage and confidence. On the other hand, the patient who makes the struggle by himself, under the handicaps of "home-treatment," usually becomes first discouraged, then indifferent, and ends by being demoralized.

[*To be continued.*]

Among the Books

FALTA-MYERS: "THE DUCTLESS GLANDULAR DISEASES"

The Ductless Glandular Diseases. By Wilhelm Falta. Translated and Edited by Milton K. Meyers, M. D. Second edition. With 101 illustrations in the text. Philadelphia: P. Blakiston's Son & Co. 1916. Price $7.00.

It is only sixty years since Addison first drew attention to a peculiar disease of the adrenal glands—one of the several glandular structures of the body, the functions of which continued to puzzle both anatomists and physiologists up to the most recent time. Investigations which were thus directed into a field as yet unexplored received a further impetus in the eighties of the last century and since then by the beautiful work by Theodore Kocher and others on the thyroid gland.

Gradually the study of the ductless glands was undertaken more generally. The investigation of their diseases, of pathological changes found in them, and of the results produced by their partial or total extirpation in time led to the conviction that these structures produce important secretions that enter directly into the circulation and are essential for the normal progression of many vital phenomena. Then came the monumental work by Sajous on the internal secretions, after that the one by Professor Biedl, and at last it became possible to apply the results of all the various theoretical experimental and tentatively practical observations. Then Professor Falta produced his work on diseases of the ductless glands, in which the results of experimental research in the laboratory are combined with the practical bedside observation of the clinician.

It is but little over a year since the first edition of Professor Falta's book became accessible to the English-speaking physicians, through Doctor Meyers' splendid translation, and the fact that a new edition was called for in so short a time bears witness to the realization, on the part of numerous physicians, of the vital importance of the study of the endocrine glands, their diseases, and their influence upon the physiological and pathological processes.

Falta's book is the more useful to the practitioner, in that it considers the practical aspects of the problems involved. The experimental and clinical employment of the preparations obtained from the various endocrine glands, and the measures instituted with a view to stimulating their functioning when these appear to be insufficient or of moderating them when excessive, have demonstrated the essential need of detailed observation in this field.

It is a cause for congratulation that the English translation of this work was written with so wide and thorough a knowledge of the subject and with fitting consideration of the work contributed by English-speaking physicians. It deserves, and will repay, careful and continued study and will make possible a new and more definite understanding of many clinical problems that are obscure without it.

"THE ANNALS OF MEDICAL HISTORY"

A number of years ago an attempt was made to publish the "Archives of Medical History"; however, this interesting periodical enjoyed only a brief existence and far less popularity than it deserved—the latter explaining the former.

Quite recently, a renewed venture in this direction has been undertaken, resulting in *The Annals of Medical History*, the initial number of which (for April, 1917) made its appearance a few weeks ago; and it is sincerely to be hoped that the present publication will meet with a more cordial and substantial financial support on the part of physicians, so that it may be able to survive the many vicissitudes of its infantile and childhood period—which, indeed, are as serious in the case of, let us say unusual medical publications, as in that of human beings.

Number 1 of *The Annals of Medical History* is a beautiful fascicle, folio size, of 108 pages. The journal is edited by Dr. Francis R. Packard, of Philadelphia, with whom are associated such well-known students of history as Harvey Cushing, George Dock, Mortimer Frank, Fielding H. Garrison, Abraham Jacobi, Howard Kelly, Sir William Osler, not to mention several others. It is published, as may be guessed by reading physi-

cians, by that wideawake and progressive publisher Paul B. Hoeber, of New York.

The first number contains an article on the scientific position of Girolamo Fracastoro, with especial reference to source, character and influence of his theory of infections. In addition to this, there are several other articles of historical interest, an editorial discussion of the legend of the mandragora, besides reviews on books on medical history.

Mechanically, the journal is beautiful, printed on heavy paper, with special and exceedingly readable type, and attractive illustrations. The Reviewer desires to express his particular satisfaction in offering his greetings to *The Annals* and extends his cordial good wishes for its welfare and for a safe and successful journey over the ocean of medical literature.

HAZEN: "DISEASES OF THE SKIN"

Diseases of the Skin. By Henry H. Hazen, A. B., M. D. With 233 illustrations, including 4 color-plates. St. Louis. The C. V. Mosby Company, 1915. Price $4.00.

In this volume, the author set himself the task to find a middle way between the voluminous and compendious large treatises on skin diseases and the smaller books that virtually are exaggerated quiz-compends. Devoting his efforts primarily to a complete description of the common diseases, he was forced to omit many of the very rare ones; without, however, curtailing the value of the book, we believe, to the general practitioner. Possibly this very fact makes it the more useful. The arrangement of the subject-matter is logical, while the text is concise, yet, sufficiently detailed and clear to convey an excellent idea of the diseases described. The illustrations, as also the printing and general makeup of the book are remarkably fine. It may be added that the author wisely has paid much attention to the important subject of histopathology. Altogether, this book has, on several occasions, proved of great service to the Reviewer, and it is cordially recommended.

SUTTON: "DISEASES OF THE SKIN"

Diseases of the Skin. By Richard L. Sutton, M. D. With 693 illustrations and 8 colored plates. St Louis: The C. V. Mosby Company. 1916. Price $6.50.

Somewhat more pretentious than the preceding work, this one constitutes an attempt to present the entire subject of dermatology in a comprehensive and, at the same time, concise manner. Accordingly, many skin diseases here are described that are uncommon. In the matter of treatment, the author properly lays stress upon the importance of general treatment, in addition to local measures; also, especially in infectious skin diseases, to prophylaxis. Much attention is devoted to pathology, which is particularly tempting in the study of cutaneous affections.

"MEDICAL CLINICS OF CHICAGO"

The May, 1916, number of *The Medical Clinics of Chicago* (volume 2, number 6), now out, completes the second volume of this publication and at the same time is the last number to be published as a separate publication. This is owing to the fact that *The Chicago Clinics* is to be merged into *The Medical Clinics of North America*, the new publication to embrace the best clinical instruction of the leading medical centers of this continent.

This new publication will be issued six times a year, each number to be a handsome octavo volume, of approximately 300 pages, devoted exclusively to the work of respectively one medical center. It is planned to issue a Baltimore number, a Philadelphia number, a New York number, a Boston number, a Chicago number, and so forth, to be devoted to the particular clinical teachings in each given medical center; and it may confidently be expected that this expansion of *The Medical Clinics of Chicago* will prove a most happy undertaking. We assume that the subscription price will remain the same, namely, $8.00 per year for paper-bound volumes, and $12.00 per year for the numbers bound in cloth. The publishers are The W. B. Saunders Company of Philadelphia and London.

ROBINSON: "WOMAN, HER SEX-LIFE"

Woman: Her Sex- and Love-Life. By William J. Robinson, M. D. Illustrated. New York: The Critic and Guide Company. 1917. Price $3.00.

The men or the women in this country of ours who are fitted to write authoritatively upon the sex-life of woman, by virtue of a large and wide experience with people of both sexes whose mixed-up sex-problems demanded adjustment, are not very many. The men who can write upon this exceedingly difficult subject in a manner which, while forceful and convincing, is absolutely free from all

objectionable taint of suggestiveness, obscenity or levity—those men are even still fewer. The point that at once strikes the reader most strongly in this book is, the terrible earnestness of the author. No matter whether you agree with him on every point or not, immaterial whether you even may believe one or the other of his opinions and assertions to be mistaken or worse, you cannot deny that he is sincere, earnest, true to himself and to his convictions. It is this quality that makes Doctor Robinson such a strong writer and such a persistent protagonist of anything for which he enters the lists.

In this, his latest book, on the sex- and love-life of woman, Doctor Robinson has been at great pains to exclude everything that does not have the support of fact, of common sense, of truth. He objects fiercely to the squeamish, prudish puritanism of those who hold the discussion of sex-matters, indeed, even the sexual relations, to be sinful and unclean; as though any instinct, any impetus so forcefully and ineradically implanted by nature, by God—as you will—could be sinful and unclean!

But, while insisting upon the right of full and free discussion, Doctor Robinson is just as insistent that this discussion shall be dignified, clean, and truthful. His deep sympathy with men and women ill because of sexual errors, of ignorance of sex, and its unfortunate consequences is ever manifested in his courageous and wholesouled demand that the light of full and free investigation be turned upon these delicate problems; although without touching rudely that which always must be sacred to the finest susceptibilities. This sympathy is extended, very naturally, more especially to woman, in accordance with the author's well-known leaning to take the side of the "under dog." Since in sex-matters "woman carries the heaviest burden and always pays most dearly, it becomes incumbent upon man to treat her with special consideration, with genuine kindness and chivalry."

There are many points that might be mentioned and commented upon; just a few must suffice.

The reasons why women and girls should receive proper information on their sex-life are potent; the problems of sexual errors, masturbation, for instance, are judged more leniently than a hypocritical public may approve. We hardly believe, however, that the relative frequency of masturbation in boys and in girls, respectively, can be estimated as closely as the author ventures. The arraignment of alcohol, as a frequent and powerful cause of illicit intercourse, with incidental infection, is only too just. Holding that the sex-instinct is physiological, normal, and natural, and in view of the fact that its ideal satisfaction, in the ideal marriage relation, is impossible to many, the author is gentle in his judgment of those who "sin" through love or on account of overpowering sex-need. But, while he insists, very properly, that a woman who has yielded once is not, for this reason, "fallen" or abandoned and criminal, he, yet, objects to the demand of one, single moral standard for both sexes, for the reason that woman should, and must, stand upon a higher plane than man, inasmuch as more is demanded of her, for, her responsibility is the greater.

If this volume is to be utilized as a textbook, so to speak, for sex-knowledge, and especially if it is to be given into the hands of young girls, we should prefer a somewhat stricter separation of the various topics. Many things are said that better are kept away from the adolescent girl and should be said only to married women or, at least, to women who have attained their years of discretion. However, we doubt whether the author intended his book for immature or young girls. It is an excellent teacher and guide for women, and through their intermediation may be made such, also, for their younger sisters.

HOFFMAN: "MORTALITY FROM CANCER"

The Mortality From Cancer Throughout the World. By Frederick L. Hoffman, LL.D. Newark, N. J.: The Prudential Press. 1915.

A disease which results in an annual loss, in the principal civilized countries of the world, of not less than 500,000 lives and in the United States (in 1915) of approximately 80,000 lives without a doubt merits the most intensive and extensive study that has been devoted to the cancer-problem within recent years. When it is found that in this country the deaths from cancer are increasing at the rate of about 2.5 percent a year, in contrast with the mortality from preventable causes, which is decreasing, then the necessity of devoting every possible effort toward the elucidation of the problem is obvious, the more so as it still by no means is certain what causes the malady.

Under proper methods of research, statistical study at length has acquired a well-established position in the medical sciences.

This is owing, in a not inconsiderable degree, to the author of the present volume, Dr. Frederick L. Hoffman, who is statistician of the Prudential Insurance Company of America and probably the foremost living statistician of the world. The present volume contains an immense amount of statistical data concerning the cancer-question and is indispensable for all those who wish to devote more than passing attention to this important subject.

SMITHIES AND OCHSNER: "CANCER OF THE STOMACH"

Cancer of the Stomach: A Clinical Study of 921 Operatively and Pathologically Demonstrated Cases. By Frank Smithies, M. D. With a Chapter on the Surgical Treatment of Gastric Cancer by Albert J. Ochsner, M. D. Illustrated. Philadelphia: W. B. Saunders Company. 1916. Price $7.00.

This work attempts to set forth the facts that are considered valuable from a study of 921 operatively and pathologically demonstrated instances of cancer of the stomach. It represents a clinician's analysis of certain facts observed by him in a large number of patients afflicted with a like ailment.

In patients suffering from cancer and who have been subjected to operative treatment, the pathological study of the growths removed, *in vivo*, makes possible a degree of investigations that is not granted to the internist. Moreover, a large series of cases studied in a uniform manner is exceedingly likely to yield valuable results. For this reason, the present treatise should prove of unusual value.

ASHBY: "INFANT MORTALITY"

Infant Mortality. By Hugh T. Ashby, B. A., M. D. Cambridge: University Press. New York: G. P. Putnam's Sons. 1915. Price $3.25.

This book is one of a series of volumes dealing with the various subjects connected with public health, which is being published by The Cambridge University Press. The different volumes of this series present in a convenient form the available knowledge on the subjects treated and are written by men who have devoted particular attention to the topics, so that these books include the latest scientific and practical information offered in a manner not too technical and, thus, of service to laymen.

The present volume is based upon the experience gained by the author from contact with the poor in Manchester and Salford, England, and also in some of the large cities in the United States of America. It is written with a view to being of practical use and omits purely medical and technical details and considerations. It is to be emphasized that the discussion of subjects still under consideration is characterized by great moderation and that the author seems to be commendably free from faddism. To give just one instance: The influence of alcohol upon the mother before the birth of a child is shown to be more indirect than direct, since it has the effect of producing more poverty, which means a weakly and a less healthy baby.

Doctor Ashby believes in prevention. He insists upon the importance of educating girls in domestic subjects, teaching them to run a home smoothly and well. Although it is unavoidable, especially among the poor, that the daughters must assist in earning money, it never must be forgotten that the daughters are the future mothers and that ultimately their principal sphere of influence and activity will be in the home. It, therefore, is important that they should learn how to spend money wisely. As the author expresses it, "a woman's knowledge of earning money need not be as extensive as a man's, but, it is essential that she should know how to spend it. It is a shame to a boy if he can not earn it, and it should be a shame to a girl if she can not spend to advantage."

The scope of the present book is far wider than is suggested by these remarks, and the subject is treated in such a reasonable and concise manner as to make Doctor Ashby's book a very valuable one.

HAZEN: "SKIN CANCER"

Skin Cancer. By Henry H. Hazen, A. B., M. D. With 97 illustrations in the text and a colored frontispiece. St. Louis: C. V. Mosby Company. 1916. Price $4.00.

In this book, an effort has been made to gather under one cover the latest views on malignant tumors of the skin, and to give the personal experience of the author and the experience gained in Doctor Bloodgood's surgical-pathological department of the Johns Hopkins Hospital as also in the surgical, pathological, and dermatological departments of the Freedmen's and Georgetown University hospitals.

The aim of the book is, to be both scientific and practical—to give the correct pathology of the cutaneous neoplasms and to point out how this may guide treatment.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6319.—"Suspected Tuberculosis." X. B. D., Illinois, forwards a specimen of nasal discharge for examination. This, he says, has very little odor and exudes in large quantities. Tuberculosis is suspected. Instructions for making the von Pirquet test are asked for.

If you believe that your patient suffers from tuberculosis, it would be well to submit for examination a specimen of the patient's expectoration, not only the sputum, but that material which is raised from the lower respiratory passages, preferably in the morning and literally by expectoration (from *ex*, out, and *pectus*, chest).

The von Pirquet test which you contemplate making is of very little clinical value. That is to say; it can give you no information as to whether tuberculous disease is present or not. All it can indicate is, that the patient has, at one time or another, been infected with tubercle-bacilli.

As you know, tuberculosis infection does not mean tuberculous disease. In other words a person may be infected with tubercle-bacilli and the infecting bacilli are imprisoned in lymph-glands or in organs and are encapsuled within tubercles enclosed by fibrous tissue. These tubercles may be so small that they do not interfere with the normal functioning of the organ, and for this reason there is no disease. Nevertheless, the infected person will respond to the tuberculin test, if made after the method of von Pirquet.

As a matter of fact, the von Pirquet test gives a positive result in from 80 to 90 percent of all clinically healthy persons older than about ten years. From this, the clinical futility of making that test is evident. It is of purely scientific and epidemiologic interest.

The diagnosis of tuberculosis, that is, of active tuberculous disease, is made by a positive result of the sputum examination (expectoration), and, more important, by a careful valuation of the clinical history of the case and the results of a detailed physical examination.

There are certain diseases that long have been known to predispose to the development of tuberculous phthisis. Further, there are certain clinical symptoms that cause the physician to suspect the disease. Given a person who has for a long time felt very tired on relatively slight exertion, whose appetite is insufficient, whose nutrition is below par, who, perhaps, has lost weight, has no ambition, looks pale and peaked, possibly has a slight hacking cough but which need not be "productive," who is inclined to have an elevated temperature during the afternoon, who complains of vague chest pains, especially in the region of the shoulder-blades—given such a patient, we should certainly suspect tuberculosis. If then, in addition, we found the heart to beat rapidly or to be irritable, pulse pressure lower than normal, if in the lungs, especially over the upper lobes, immediately below the clavicle or both, at the crest of the scapula, we found consolidation, perhaps with interrupted inspiration or a sharp expiratory note and a prolonged expiration, we very probably should diagnose tuberculosis, whether the sputum examined were positive or not. Further, in the case that the examination of the expectoration were negative three or four times in succession, we probably should decide to confirm our diagnosis by means of the tuberculin test. If the expectoration shows tubercle-bacilli, the tuberculin test is unnecessary.

These are some suggestions which we venture to submit to your consideration, hoping that they may aid you in studying your case on hand. Of course, if you were to find signs of long-continued destruction, cavity formation, rales, and so on, the diagnosis again would be self-evident and the

tuberculin test entirely uncalled for. In this event, however, a sputum examination would be positive.

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QUERY 6320.—"Phlegmasia Alba Dolens." J. W. S., Indiana, wishes to know "the very latest efficient treatment for phlegmasia alba dolens." The term here employed by our correspondent has been rather loosely applied to several different pathologic conditions; we assume, however, that he is dealing with a typical thrombophlebitis of the iliac and femoral veins, such as occurs early in puerperal sepsis. As DeLee points out, in simple thrombosis of the saphenous and femoral veins (or the iliac), edema of the extremity begins at the foot and extends to the trunk; there is very moderate fever, little pain, and the symptoms, in general, are mild. The skin is cool, translucent, and mottled, and puncture yields a thin serum.

These cases have been called mechanical thromboses, but the present writer believes that they are always the result of a mild infection. Should no accident occur, the general health remains good, fever keeps a low level, recovery takes place in from two to six weeks.

Repeated laboratory tests have shown the causative agent to be either an attenuated streptococcus or the staphylococcus; even, sometimes, the bacteria which normally grow as saprophytes in the genital tract.

In such simple, as in the more severe, forms of thrombophlebitis, the administration of an appropriate bacterin invariably is indicated. We are inclined to believe that the application of ointments, wet dressings, and so forth, rarely is necessary. Aside from the general rules applicable in all forms of puerperal infection, good nursing is of prime importance. Both, moving the patient and the affected limb, should be restricted to the minimum. The limb should be elevated slightly and supported in a cradle to which is attached some adhesive body, to prevent dropfoot. This device is illustrated and the entire subject discussed in DeLee's "Principles and Practice of Obstetrics."

When there is great pain, a light ice-bag or warm-water-bag (as may prove most comforting to the patient) should be applied. It must be borne in mind that, when circulation of the part is poor, chilling or burning should be carefully guarded against. It may be necessary to administer opiates, to relieve pain.

Later, usually after four to six weeks, when the patient is able to get up, a rubber stocking or, better still, an elastic woven bandage may be applied, with advantage.

Internally, nuclein, calcium sulphide, and echinacea may advantageously be administered say, echinacoid, gr. 1, and calcium sulphide, gr. 1-3, four times a day; nuclein, 10 drops every four hours.

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QUERY 6321.—"Petit-Mal." C. J. G., Demerara, British Guiana, has under treatment a girl just over twelve years of age, who is suffering from petit-mal. She began menstruating about six months ago and her attacks began at about the same time. Just before the attack she turns pale, her eyes become fixed, she clutches at her clothes about her throat or tries to disrobe, meanwhile mumbling a few words. There is a complete loss of consciousness for about a minute or two, but, she has no convulsions. When she recovers, she is somewhat dazed and is inclined to sleep. The attacks come on a few days before or after her menstrual periods, and only in the morning. Otherwise, she is a bright and intelligent girl. There is no family history of this disease. She has received various bromides, zinc oxide, valerian, belladonna, and sodium lactate, but so far with no satisfactory results. Advice is requested.

As you will readily understand, with our extremely limited conception of your patient's conditions, it is impossible to prescribe intelligently for her. The fact, however, that the seizures commenced with puberty, would lead us to believe that the main focus of irritation probably is in the pelvis. We are confirmed in this view by the fact that she tries to disrobe. It is a peculiar fact that in such cases young female patients either begin to hitch their skirts up to the knees or attempt to take off their clothes. The present writer, after many years of observation, regards this as almost diagnostic of pelvic irritation.

Under such circumstances, simple circumcision or clitoridectomy may prove necessary and result in cure. Or, also, an overthick or "pinhole" hymen may have to be incised, while in every instance thorough dilatation of the anal sphincters should be done.

The habits of these patients should be carefully investigated. The physician should not rest satisfied with their simple statement, but have the individual watched carefully—especially at the time they go to sleep.

You are aware, of course, that there subsists an extraordinary sympathy between the pelvic viscera and the nasal mucosa and that

not infrequently some abnormality of the nares or nasopharynx can be discovered, the removal of which will be followed by the prompt disappearance of the entire train of the nervous symptoms.

From the above and perusal of the more comprehensive two pamphlets mailed to you (Candler's "Epilepsy" and Atkinson's Solanine versus Bromides") you will readily understand how essential it is that treatment be based, in each case, upon a clear conception of underlying pathologic conditions and that every possible focus of irritation be removed. Careful dieting, the maintenance of thorough elimination, and the administration of sedatives are, of course, essential.

If you have access to a recent edition of Thomson's "Clinical Medicine" and will read the chapter on epilepsy and its treatment, you will find it distinctly informative.

If you will make a very thorough examination of your patient and report your findings in greater detail, it will give us great pleasure to attempt further and, we hope, more helpful suggestions.

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QUERY 6322.—"Hodgkin's Disease." W. S. R., Missouri, asks for advice in a case of Hodgkin's disease. Male, American by birth; age forty-seven; weight, 184 pounds. Neck commenced to enlarge eleven months ago. Neck measurement, 19 inches. Father died of consumption at the age of sixty-six; sick one year. Mother had cancer on face, but died of kidney trouble. Sister died of consumption at the age of twenty-five; sick six months. Brother died of dropsy at the age of thirty-seven. Patient has had stomach and kidney trouble, with dropsy four years ago, but is now enjoying the best of health, except for disease mentioned. He has been using "salver," [?] put up by E. C. Galliger, of St. Louis. The doctor has thought of employing animal-therapy; intravenous injection of sodium cacodylate, and also of iodine; local applications of iodex.

The problem of pseudoleukemia, or Hodgkin's disease, is still far from being solved, since even the presumable infectious virus, the Hodgkin bacillus, is not sufficiently vouched for. Nevertheless, clinical evidences point to the infectious origin of the disease, and probably it is only a question of time that the actual causative virus will be discovered.

Recent authorities are unanimous in declaring that surgical treatment of this malady is unsatisfactory; indeed, Sir Frederic Eve, senior surgeon of the London Hospital, declares (*The Practitioner*, April, 1911) that the operative treatment may be summed up briefly in "Let it alone."

Yates and Bunting, who contributed what probably is the largest uniform study of Hodgkin's disease (63 cases), (*J. A. M. A.*, Mar. 10, 1917), agree with Fischer and Dorothy Reed that surgery, always of doubtful value, frequently is positively harmful, basing this view upon the observation that local recurrences, usually soon, are the rule after excision.

Holding and Brown, in a study of 18 cases of Hodgkin's disease (*J. A. M. A.*, March 3, 1917), point out that the results from surgical removal of the affected glands are only local and that the operation constitutes more or less of a shock and a strain on the patient's vital resources. They emphasize the necessity of intensive general Roentgen-ray treatment in all of these cases, immediately after the diagnosis is established. According to them, the Roentgen-rays should be given over all lymphatic structures of the body, including the mediastinal and abdominal lymph-nodes; thus giving a general action, which, in proper dosages, has invariably been found to improve the patient's general physical condition, instead of weakening him as the extensive surgical operations do in the fully developed stages of the disease.

In their experiences, the administration of inorganic arsenic in large doses, as generally recommended in medical textbooks, has been attended with poor results, and where efficient Roentgen-ray or radium treatment is available, arsenic in large doses should be avoided. They much prefer to overcome the anemia by the use of sodium cacodylate, iron, and constant and persistent elimination of all fecal accumulation and autointoxication from the intestinal canal, as being more efficient and less harmful treatment.

Other authors, however, have placed great reliance on arsenic, although Yates and Bunting deny that it has any specific, lasting virtue in any form yet available, from Fowler's solution to salvarsan. Yet, we cannot but think that sodium cacodylate might be of use.

As to the intravenous injection of iodine, that might be attempted in alternation with the sodium cacodylate, although it is absorbed so readily that it quite satisfactorily may be given by mouth. One or 2 grains of calx iodata given three times daily, on an empty stomach, with a tumblerful of water (preferably hot), would aid in promptly securing the full iodine effect.

We have had no personal experience with the use of organic substances or extracts,

although we believe that these might be advantageous.

As you know, it has been suggested in the past that Hodgkin's disease, at least in many cases, occurs upon the basis of an infection with tubercle-bacilli. In this particular case, we are inclined to believe that the patient has been infected; in fact, we are certain of it, and, for that reason, we strongly suggest a course of a suitable "tuberculin" preparation. The best one, in our opinion, is the von Ruck's antituberculosis vaccine, which may be given in an initial dose of 1-10 mil (Cc.). The succeeding doses and their frequency would depend upon the reaction produced. If you care to make a trial with this treatment, we shall be glad to write you further about it.

It goes without saying that your patient requires general treatment—hygienic, dietetic, eliminative, and supportive. The tonic treatment, sodium cacodylate, and the special treatment, designed to stimulate the action of the glands by means of iodine, must be undertaken with great care, in order to guard against accidents. The suggested antituberculosis-treatment will afford a valuable guide as to a possible tuberculous basis; in this particular case, one or two doses being sufficient to decide the question.

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QUERY 6323.—"Catarrhal Conjunctivitis." R. W. M., Missouri, has under his care a case of "pink-eye" and having had no experience with the malady asks an outline of treatment. Pink-eye, it may be stated, is very prevalent just now throughout the country. Sometimes the Morax-Axenfeld diplobacillus is the invading organism, more often, the Kock-Weeks bacillus. This latter organism stains faintly with methylene-blue, and is Gram-negative. The condition is contagious, of course, and is associated with phlyctenulae. It is frequently met with in children.

All forms of mucopurulent conjunctivitis are beneficially influenced by astringents, and we know of no better combination than this: zinc sulphocarbolate, grs. 2; boric acid, grs. 10; hydrastine hydrochloride, gr. 1-50; water 1 ounce. If distilled water is unobtainable, then use ordinary water thoroughly boiled for ten minutes. This solution should be dropped into the eye several times a day.

Zinc sulphate (1 to 3 grains to the ounce) may also be regarded as practically a specific; still, this writer prefers the combination of zinc and boric acid.

Lotions of mercury bichloride (1 : 5000) have been employed, but they are distinctly more painful than those of boric acid. In the more severe forms of conjunctivitis, it may be necessary to employ a solution of silver nitrate (1-percent) or protargol (10-percent).

At night, a little borated petrolatum may be inserted into the conjunctival sac and allowed to spread over the eye.

Zinc or alum should not be used when there is any implication of the cornea.

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QUERY 6324.—"Treatment of Paralysis Agitans." P. J., Michigan, asks what lupuline would do in a case of paralysis agitans. Lupuline sulphate, like lupulin, exerts an aphrodisiac, tonic, and anodyne effect and is of especial service in erethism, satyriasis, chordee, and similar affections. We cannot conceive how it would prove of real service in paralysis agitans. As you are aware, treatment in this disease usually proves ineffective and, as Church and Salinger, in "Diseases of the Nervous System," express it, the disorder is "generally very protracted but uninterruptedly progressive and there is no recovery therefrom. Reports of individual cures are not sufficiently trustworthy and probably depend upon diagnostic errors; here and there the affection may be arrested, but very rarely does a transitory improvement occur; even in the most favorable cases, the disease runs a protracted course to its unavoidable end."

Despite our modern methods, the anatomical foundation of this severe affection has not yet been discovered and we have to admit that we do not yet know the positive pathologicoanatomical changes that give rise to paralysis agitans.

Perhaps arsenic is the most valuable remedial agent for this condition, and we should be inclined to administer sodium cacodylate subcutaneously or intravenously in practically every case.

Thorough elimination, with careful dieting and the use of bipolar faradic baths and galvanization of the head, the back of the neck and of the sympathetic, as well as of the back and the extremities, are the essentials of treatment. The patient should be removed (if his condition is at all favorable) from ordinary surroundings to the mountains or pinewoods, also, he should receive baths, at first lukewarm, gradually passing on to cooler sponge-baths, these followed by friction. Hyoscine or duboisine, or even hyoscyamine, in alternation with nuclein, have proven useful in many cases. Nutrition must be maintained, and all excitement kept from the patient.